The American Perfumer and Essential Oil Review

The Independent International Journal devoted to perfumery, soaps, flavoring extracts, etc. No producer, dealer or manufacturer has any financial interest in it, or any voice in its control or policy.

ONE DOLLAR A YEAR.
TEN CENTS A COPY.

NEW YORK, AUGUST, 1913. VOL. VIII. No. 6.

THE AMERICAN PERFUMER
and ESSENTIAL OIL REVIEW
PUBLISHED MONTHLY.
PERFUMER PUBLISHING COMPANY
80 Maiden Lane.

LOUIS SPENCER LEVY, President and Treasurer, } 80 Maiden Lane
JOSEPH S. MENLINE, Secretary, - - } New York.

Entered as Second-class Matter March 22d, 1907, at the Post Office at New York, N. Y., Under the Act of Congress of March 3d, 1879.

TERMS OF SUBSCRIPTION

The United States and Possessions, -	$ 1.00 A Year
Canada and Mexico, - - - - -	1.50 " "
Foreign, - - - - - - - - -	2.00 " "

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SLOW WORK AT WASHINGTON.

The United States Senate is making comparatively slow progress with the tariff bill, and the only element of progress we have to report since last month is the passing of the perfumery paragraphs of the chemical schedule exactly as indicated in our last issue.

In view of the fact that efforts are still being put forth to effect the transfer of the principal perfumery raw materials to the free list, we shall have nothing to say now in print of the rates that we have preferred; but we hope that when the tariff is again revised, that those who will lay the perfumers' cause before the Committee on Ways and Means of the House of Representatives will take counsel with the entire industry. Those who have labored in the past have worked faithfully; but we anticipate that new hands will soon take up this work.

"IN PERFUME LAND."

Under this title Dr. Sadakichi Hartmann discusses in very serious fashion, in the August issue of the *Forum*, a number of perfume problems. He begins by referring to the Octophone, of Piesse, who arranged 48 different odors in a scale similar to the musical scale, and he attempts to show that odors could be combined in much the same way as the notes of the musical scale can be combined to form agreeable chords. He describes a number of experiments he has made, but either the Doctor's experience has been too limited, or too superficial, for his conclusions are not of great weight.

For instance, he states that "The incapacity of the mucous membrane to distinguish more than one smell at a time bars all attempts to convey several odors to an audience simultaneously." This statement is palpably false, for it requires no special skill to recognize two, or even more, odors at one time; one of the commonest examples being the odor of lavender smelling salts, in which the odor of the ammonia and the lavender oil are simulta-

neously recognized by the most untutored nose. Other common examples will at once occur to any perfumer.

The doctor goes on to say, "The feelings aroused by odors alone are either *explanatory* or *reminiscent* in their effect. If our intellect associates distinct thought with an odor it is *explanatory*. If our mind is carried back vaguely to some experience producing a pictorial vision directly or indirectly connected with a sensation of smell, it is *reminiscent*."

This is a very ponderous way of stating a very simple fact, and in all the author contributes no helpful suggestions for the perfume manufacturer.

A good perfumer must have a good memory for odors; must have some natural aptitude in the association of ideas, so that he can imagine the effect of certain untried combinations of odors, just as an artist in color can picture in his mind the effect of color combinations.

Of course, due allowance must be made for the element of accident, as many a much sought-for effect is found fortuitously.

The principal problem of the perfumer of today is to reproduce the flower odors with fidelity. To be able to do this he must have a good knowledge of natural and synthetic raw materials, and he must know their uses and limitations. He must know, for instance, in building up a good rose perfume on what ingredients he must place reliance; on pomades, on liquid flower essences obtained by the use of volatile solvents, on otto of rose, on the various alcohols, aldehydes, etc., that occur naturally in the rose, but which cannot be extracted therefrom satisfactorily. In other words, the ideal perfumer is a man who can identify all the chemical bodies that exist in a living flower to give it its odor, and who can then extract those bodies from the flower itself, or from other aromatic substances, or, if necessary, create them in the laboratory. This is the aim toward which all perfume chemists are working, and while good progress has been made toward the goal in the case of several flower odors; the complete result cannot be said to have been achieved with any.

There is an instinctive affection in every human heart for beautiful and fragrant flowers, and it is this natural feeling that feeds the desire to possess paintings of flowers to enable one to enjoy their beauty after they shall have faded, and to have well-made perfumes to enable one to derive similar pleasure from their complementary element of attraction after their fragrant petals shall have yielded up their ghost.

NEW FOREIGN TRADE BUREAU.

The Bureau of Foreign and Domestic Commerce of the Department of Commerce has made arrangements to establish a branch office in the New York Custom House. Room 337 has been assigned for the purpose and George W. Doonan has been placed in charge of the office.

It has long been felt that the importers, exporters and manufacturers would be in a better position to utilize the information gathered by the government if the data and samples were located in this city. With a branch bureau in New York business men will be able to keep in closer touch with officials of the Department of Commerce, give their aid in the matter of proposed or pending inquiries, and profit by the information gathered by the department.

The bureau's publications, samples of foreign-made products, plans and specifications of construction work abroad, lists of foreign dealers in various lines, manuscript consular reports and similar documents will be forwarded from Washington to the New York office, where they will be open for inspection by interested parties. The duties of Mr. Doonan include visits to representative commercial associations, manufacturers and merchants in New York and vicinity.

FOOD LAW DEVELOPMENTS.

Since Secretary Houston extended the scope of the meat inspection law there has been little activity in the way of changes in the administration of pure food and drug laws. One of the chief new forms of activity has been the publication of notices of judgment by means of circulars and bulletins to the newspaper correspondents. The idea is based, according to what the new secretary says, upon the notion that this course will reduce violations of the law. Thousands of these notices are being mailed promiscuously. The best that can be said of the innovation is that it is of doubtful value.

In other directions Secretary Houston is being criticized for making haste slowly, if at all. The New York *Journal of Commerce* declares that the old policy of employing outsiders without legal warrant continues in effect and moreover that the assignments are being increased. Old and objectionable general orders, on which the new secretary had investigations made, apparently have received no subsequent consideration. The old Referee Board waste is continued. Originally created by President Roosevelt as a brake to hold down Dr. Wiley, it has done practically nothing for a year or more. With no indication of utilizing this board again, Mr. Houston asks for an appropriation of $25,000 to carry it along. If the board ever really was necessary its usefulness has quite departed and the $500 a week is going for nothing. Will the new administration wake up?

SOAP'S ADVANCE IN ENGLAND.

Announcement was made in England last month that in consequence of the continuous advance in the cost of raw materials of the soap industry, the price of soap to the consumer has gone up a halfpenny per pound. A statement issued through the press explaining the cause of the rise stated that

> "a curious and interesting fact in connection with this advance in the price of a universal commodity is that the main competitor with the soapmaker in the raw material market is the margarine maker. Many of the fats and oils which are the main basis of soap used to be at the almost exclusive disposal of the soapmaker. Today they are in demand for the delicacies of the table.
>
> "The modern manufacturer of soap uses the best and purest animal fats and vegetable oils obtainable, but it is just these products that attract the margarine manufacturer because of their edible qualities, improved as they have recently been by the art of the chemist. Of late years the soapmaker has turned his attention to an increasing degree to the palm forests of the world, but

here, also, the soapmaker is faced with the fact that the product of the oil-bearing palm is required for something else than making soap.

"All along the line of the soapmakers' oils and fats the food producer is in competition with him, and, as an example of the result, it may be noted that cocoanut and palm kernel oil have practically doubled in price within the last ten years. The same observation applies to many other of the raw materials used in soap manufacture, but it may be put to the credit of our soap manufacturers and be considered as a tribute to their skill that, in spite of the prolonged upward movement of raw material prices, an increase in the price of the manufactured product to the consumer has been so long delayed, and is so comparatively small in proportion to the rapid and great rise in the cost of raw material."

The conditions which have influenced the manufacturers to advance the price of soap in England one cent a pound are not duplicated here and the advance has found no responsive echo in America. Conditions here are trending in the direction indicated in the diverting of soap materials to other purposes, but our resources are greater than England's and while there may be pinches here and there on this side of the ocean a rise in price is doubtful unless conditions become worse than they are at present in this direction. The matter probably will receive little, if any, consideration until after Congress acts on the tariff.

PROOF THAT IT PAYS TO ADVERTISE.

The *Ambassador* says that an advertising solicitor of one of the big circulation magazines called on a manufacturer in New England.

He stump speeched his proposition, and extolled its pulling power. He unlocked the flood gates of oratory as if there were more than a million words in the English language and he was under contract to use them all in a single canvass.

Obsessed with his own arguments he handed out a contract to be signed—Full page—$———.

The manufacturer looked at him, smiled and said: "My dear sir, I wouldn't give you a dollar per page, per issue. You couldn't convince me that people wade through the advertising pages. My ad. would not be seen."

The solicitor waxed wroth. "I propose proving to you," he said, "that you are wrong. And I'm going to do it in this way:

"I am going to write a full page ad., not extolling your product, but condemning it. I am going to pick every flaw I can find in your product. I am going to tell the thousands of readers of this publication why your goods are poorer, not better, than others."

Did he get a rise out of the manufacturer? Why, say, there isn't an ink made that could duplicate the aerial color scheme in that office.

"If you do that," said the manufacturer, "I will sue your publication for $100,000."

"But," said the solicitor, "after what you have said, do you think you could prove damages?"

"Prove damages," said the manufacturer, "of course I could prove damages. Do you suppose if a million people saw an ad. like that it wouldn't hurt my business?"

"Of course, it would hurt your business," said the solicitor, "and, of course, you could prove damages. And, of course, you could collect. And, of course, I haven't any idea of doing it and never had. But the thing I'm trying to get at is how a successful, logical man like you figures out that a story to your detriment, printed in the advertising pages of my publication, will be seen by a million?"

PURE ADVERTISING NOW.

With the recent disposition on the part of the government to take the responsibility for making men honest and thereby relieving others of looking out for their own rights, there is a growing feeling in trade circles that America does not come within the classification of "that country governed best which is governed least," according to the *Journal of Commerce*. The latest illustration is the proposed law to prohibit false advertising in the District of Columbia. Logically, it will be but a step to fine and imprison the man who makes any other form of incorrect statement in print and then a few hundred newspapers will be edited from jail, unless their editors find some way to discern the inflexible truth from the maze of conflicting information from which public prints are culled. Here is the bill, introduced by Congressman Dent:

"That any person, firm, corporation, or association who, with intent to sell or in any wise dispose of merchandise, securities, service, or anything offered by such person, firm, corporation, or association, directly or indirectly, to the public for sale or distribution, or with intent to increase the consumption thereof, or to induce the public in any manner to enter into any obligation relating thereto, or to acquire title thereto, or an interest therein, makes, publishes, disseminates, circulates, or places before the public, or causes directly or indirectly, to be made, published, disseminated, circulated, or placed before the public in the District of Columbia, in a newspaper or other publication, or in the form of a book, notice, handbill, poster, bill, circular, pamphlet, or letter, an advertisement of any sort regarding merchandise, securities, service, or anything so offered to the public, which advertisement contains any assertion, representation, or statement of fact which is wilfully untrue, shall be guilty of a misdemeanor and punished by a fine of not more than $500 or imprisonment for not more than six months, one or both, at the discretion of the jury trying the case."

CULTIVATING EXPORT TRADE.

Good advice for American manufacturers interested in foreign trade is given in a recent report of Consul General R. E. Mansfield, at Zurich, and the extracts here given will apply to other countries besides Switzerland:

"How to meet successfully foreign competition, which is both keen and intelligent, and the best methods of obtaining and holding foreign trade, are questions to which the American manufacturers seem to be giving more serious attention in recent years. There is also better cooperation between American consuls and exporters, and evidence of a more systematic and intelligent campaign on the part of the latter to extend their trade in foreign markets.

"One of the causes of failure on the part of some Americans who try to enter foreign commercial fields is the fact that they are not willing or do not seem to think it necessary to bring as much intelligence to bear upon the task of acquiring foreign trade as they do upon building up new markets at home. Foreign buyers are not unlike those in the United States except, generally speaking, more conservative, and to obtain orders from Swiss importers

it is necessary to acquire in some degree, at least, the purchaser's point of view, and to try to sell them the things they desire and not what the exporter thinks they should buy. A close study of customs and preferences is one of the imperative conditions of export trade.

"It is not necessary for American manufacturers to make their products conform in design and style with those made in other countries or to imitate those of European competitors, but it is important that they place before prospective customers samples from which to make selections and that their wares be shown and the business solicited by salesmen who know the trade and speak the language of the country.

"The best evidence of the merits of many American-made articles sold in this market is the fact that they are extensively imitated and copied by Swiss and German manufacturers. These imitations are generally inferior in style and finish, their sale depending more on the price than on their merits."

BRITISH PHARMACEUTICAL CONFERENCE.

The jubilee meeting of the British Pharmaceutical Conference was held last month in London and proved to be an important and interesting gathering. John C. Umney, F.C.S., the new president of the Conference, in his inaugural address treated of pharmaceutical affairs and referred especially to the history of the revision and publication of the British Pharmacopoeia.

In the discussions complaints were voiced against the British Food and Drugs Act. Several papers were read on this subject. Among the other papers were the following: "Structure of the Soya Bean," by T. E. Wallis, B.Sc., F.I.C.; "Essential Oil of Witch Hazel," by H. A. D. Jowett, D.Sc. and F. L. Pyman, Ph.D., D.Sc.; "Alcohol in Geranium Oils," by W. H. Simmons, B.Sc., F.C.S.

The officers chosen for 1913-1914 included the following: President, E. H. Farr; vice-presidents: Sir William Baxter, J.P., J. P. Gilmour, E. F. Harrison, B.Sc., F.I.C., E. Saville Peck, M.A., W. F. J. Shepheard, Edmund White, B.Sc., F. I. C.; honorary treasurer, D. Lloyd Howard; honorary general secretaries: Horace Finnemore, B.Sc., F.I.C., Reginald R. Bennett, B.Sc., F.I.C.; honorary local secretary, Cecil Owen.

AMERICAN CHEMICAL SOCIETY.

The American Chemical Society will hold its forty-eighth annual meeting at Rochester, N. Y., on September 9 to 14 inclusive. Probably from 700 to 1,000 chemists will attend, and indications point to the fact that this will be the largest meeting in the history of the organization. The programme, as tentatively arranged, promises much of interest. Luncheons, smokers and other entertainments have been arranged, and the banquet will be a real feast. Special attention will be given to the ladies.

The programme of papers is not yet available, members having until August 22 to notify the secretary.

SOCIETY OF CHEMICAL INDUSTRY.

About 250 members attended the annual meeting of the Society of Chemical Industry which was held in the Liverpool University on July 16. The Lord Mayor of the British city welcomed the members, and the president, Professor Marston L. Bogert, LL.D., spoke of conditions generally and urged the importance of manual dexterity on the ground that it is better to market the products of high-grade labor than merely to realize on the raw material in the guise of students who just have graduated. He advocated also special schools, and in taking care of students after graduation he suggested discrimination to decide the line of work for which the postulant in the industry was best fitted naturally.

Sir William Crookes, who was elected to succeed to the presidency, was unable to be present.

NEW PARCEL POST RULES.

The Post Office Department has announced important changes in the operation of the parcel post system, including an increase in the maximum weight limit on packages from eleven to twenty pounds, a reduction in the rates of postage within the first and second zones, and the substitution of a convenient rate chart for the elaborate parcel post map in determining postage rates. The changes became effective August 15. Under regulations adopted by the Postmaster-General, the use of distinctive stamps is no longer mandatory, and the public now is permitted to mail parcels with ordinary stamps affixed.

REGARDING IMPERFECT COPIES.

After the July issue of this journal had been mailed it was discovered that two or three dozen copies had been imperfectly put together by the binders, the result being that several pages were duplicated, while others were omitted.

Any of our readers who received imperfect copies are requested to notify us at once, if they have not already done so, so that perfect and complete copies may be supplied to them without delay.

TRADE MARK DECISION.

Official publication is made of the decision of the Court of Appeals of the District of Columbia in the case of the Consumers Company *v.* Hydrox Chemical Company. Decided April 7, 1913.

1. TRADE-MARKS—RIGHT THERETO ACQUIRED ONLY BY USE.

"It is settled law, in this court, that a trade-mark is not acquired by the invention or discovery of a word or symbol, or by advertisement. It only becomes a trade-mark by attaching or affixing it to certain articles of merchandise. (*Battle Creek Sanitarium Co.* v. *Fuller*, 30 App. D. C., 411-416; *Illinois Match Co.* v. *Broomall*, 34 App. D. C., 427-429; *Hump Hairpin Co.* v. *De Long Hook and Eye Co.*, 39 App. D. C., 484-489.)"

2. SAME—"PEROXID OF HYDROGEN" AND "DISTILLED WATER" —NOT GOODS OF THE SAME DESCRIPTIVE PROPERTIES.

Peroxid of hydrogen *Held* not to constitute goods of the same descriptive properties as distilled and carbonated waters.

J. R. Offield and *L. S. Bacon* for the appellant. *E. W. Vaill* for the appellee.

SHEPARD, *C. J.*:

Appeal from a decision of the Commissioner of Patents dismissing an opposition by the Consumers Company to the registration of a trade-mark applied for by the Hydrox Chemical Company.

January 7th, 1910, the Hydrox Chemical Company applied for the registration of "Hydrox" as a trade-mark for peroxid of hydrogen. The mark having been allowed

for publication, the Consumers Company filed an opposition thereto.

The opposition alleges that a predecessor, under whom it derives title, coined the fanciful word, "Hydrox," January 1, 1892, as a trade-mark for distilled and carbonated waters and applied the same to bottles, boxes, and other forms of containers for said waters. Said word was the only name or mark used to designate its said products, and large sums of money were expended in advertising and popularizing said mark as a symbol of purity for its said products. The mark is the distinguishing trade-mark for the products of opponent and has been used as a trade-mark for distilled and carbonated waters and allied products from January 1, 1892, to present date.

Distilled water being the basis of many other products opponent added new products which would naturally come within the same class. Those named are "Hydrox" beverages such as birch-beer, ginger-ale, lemon-soda, root-beer, and sarsaparilla, in 1898; metal coolers for holding "Hydrox" water and artificial ice in 1906; "Hydrox" ice-cream in 1910; peroxid of hydrogen in 1908, under the trade-mark "Hydrox." Peroxid of hydrogen would naturally come within the line of articles manufactured by opponent as the basis of such product is substantially ninety-six per cent. distilled water. The opposition was demurred to by the Hydrox Chemical Company, and this appeal is from a decision sustaining the same.

It appears from the opposition that "Hydrox" is a word coined by the opponent January 1, 1892, and was then adopted and used by it as a trade-mark for distilled and carbonated waters. This was extended to birch-beer and other "soft drinks" in 1898. It was extended to nothing else prior to the use of the word as a trade-mark, by the Hydrox Chemical Company, July 19, 1905, for peroxid of hydrogen.

It is settled law, in this court, that a trade-mark is not acquired by the invention or discovery of a word or symbol, or by advertisement. It only becomes a trade-mark by attaching or affixing it to certain articles of merchandise. (*Battle Creek Sanitarium Co.* v. *Fuller*, 30 App. D. C., 411-416; *Illinois Match Co.* v. *Broomall*, 34 App. D. C., 427-429; *Hump Hairpin Co.* v. *De Long Hook and Eye Co.*, 39 App. D. C., 484-489.) The trade-mark so acquired does not apply to other articles not of the same descriptive properties. The question is whether peroxid of hydrogen is a product of the same descriptive properties as distilled and carbonated waters and the beverages before mentioned? Does it belong to the same class of goods?

Peroxid of hydrogen is a pharmaceutical preparation; its use is as a disinfectant. The products of the opponent are for use as beverages. The fact that the peroxid may consist of ninety-six per cent. distilled water does not bring it within the class of goods manufactured and sold by the opponent; nor is it a preparation that would reasonably come within the natural expansion of opponent's business. Many other pharmaceutical preparations contain large percentages of distilled water.

The opposition does not show that the opponent would sustain any legal damage by the registration of "Hydrox" as a trade-mark for peroxid of hydrogen; and the Commissioner was right in dismissing the opposition.

Without discussing the question further, it is sufficient to refer to the following cases for the principle controlling this case: *Muralo Co.* v. *National Lead Co.*, (36 App. D. C., 541-543); *Johnson Educator Food Co.* v. *Smith*, (37 App. D. C., 107); *Hump Hairpin Co.* v. *De Long Hook and Eye Co.*, (39 App. D. C., 484-488).

The decision is affirmed; and this decision will be certified to the Commissioner of Patents.

Affirmed.

OIL, SOAP AND BEAN IMPORTS.

From a summary of the imports into the United States in the fiscal year ending June 30, 1913, these statistics are obtained, comparison being made with 1912:

	1912.	1913.
Volatile or essential oils, distilled—		
Lemon, lbs., free	357,174	381,093
All other, free	$2,206,940	$3,182,167
All other, dut	$933,002	$1,012,660
Vegetable oils—		
Fixed or expressed—		
Cocoa butter or butterine, lbs., dut.	6,074,741	3,603,332
Cocoanut, not refined or deodorized, lbs., free	46,370,732	50,504,192
Cottonseed, lbs., free	1,513,051	3,383,511
Flaxseed or linseed, gals., dut.	737,256	173,690
Nut oil or oil of nuts—		
Chinese nut, gals., free	4,767,596	5,996,666
Peanut, gals., free	895,587	1,195,683
Olive, fit only for manufacturing purposes, gals., free	636,013	619,356
Olive, edible, gals., dut.	4,836,515	5,221,001
Palm, lbs., free	47,159,238	50,228,706
Palm kernel, lbs., free	25,932,855	23,569,031
Rapeseed, gals., dut.	1,182,768	1,549,728
Soya bean, lbs., free	28,021,282	12,340,185
All other, free	$221,325	$238,348
All other, dut	$134,601	$140,068
Soaps—		
Castile, lbs., dut	4,960,410	4,833,269
All other	$405,318	$403,734
Vanilla beans, lbs., free	841,628	1,049,497

WANT CASTILE SOAP STANDARDS.

At the recent annual meeting of the Ohio State Pharmaceutical Association the following resolutions were adopted:

"Whereas, The market is flooded with various mongrel soaps, masquerading as Castile Soap; and

"Whereas, The designation Castile Soap has long been recognized as an held to refer to U. S. P. Soap; therefore, be it

"Resolved, That we recommend the adoption of such state and national standards as will forbid the use of the term 'Castile' as applied to any soap other than the U. S. P. Sapo; and be it further

"Resolved, That we recommend the incorporation of the term Castile Soap as a synonym for Sapo in the forthcoming Pharmacopœia; and be it further

"Resolved, That copies of these resolutions be furnished to the state authorities, the federal department of agriculture and the revision committee of the U. S. P. and N. F."

Good Test of the Perfumer's Want Advs.

Editor American Perfumer and Essential Oil Review:

Please discontinue our want advertisement for a young man. We have received a number of favorable replies. Thanking you for your courtesy, we are,

Very truly yours,

ELSINORE PERFUME CO.,
C. VAN SKIVER,
Secretary-Treasurer.

Poughkeepsie, N. Y., July 24, 1913.

PATCHOULI OIL

By H. MANN

When the ordinary person hears patchouli and musk mentioned, a feeling of slight irritation pervades his being. The idea of an almost unbearable odor oppresses his mind, although in its natural state he may never even have smelled it. It is almost by suggestion, or by an innate feeling that he thinks of the smell of patchouli as something almost unbearable; there are also a great number of people who think of musk and patchouli as the same material. How much imagination plays a role in this, and how much real individual dislike of the smell of patchouli is concerned is a moot point. There are many cases known where persons after having smelled pure patchouli oil readily admitted that they thought it to be something much more disagreeable. It is as with eating, which is a matter of habit and where we follow certain traditions, and where we value and estimate things of which we do not know from our own experience. This is called prejudice, from which, especially in perfumery, a number of scents have to suffer.

The scent of patchouli oil is indispensable to the perfumer, as it is necessary for preparations where other substitutes are not at hand. Patchouli oil is distilled from the leaves of the real patchouli plant *pogostemon patchouli, Pellet,* a native of Eastern India, principally the hinterland of Singapore and Penang. Java also produces herb of patchouli, but its odor is not so strong as that of the Penang plant. The cultivated herb, in contrast with the wild herb, is propagated by cuttings. Remarkable as it may appear, the cultivated plant does not bear flowers. The gathering of the leaves, which alone contain the oil, may take place three times a year and would give large quantities of oil if the plant were not so susceptible to all kinds of diseases which frequently destroy whole plantations in a very short time.

It is also remarkable that the ethereal oil is only present in small quantities in the fresh leaves, and only develops through a kind of fermentation of the cut leaves packed into bundles. This explains why the yield from dried leaves is about 3.5 to 4 per cent., while from fresh leaves it is much less. The scent of the fresh leaves also is quite different than that from the dried leaves. The difference is not only in the scent, but also in its strength, and in its tenacity. The scent of patchouli oil is powerful and herb-like, with a peculiar fine shade reminiscent of honey, and very tenacious. The oil is viscous, of a yellow or greenish color when fresh, while when old, it becomes brownish and even dark brown, with separation of small crystals of patchouli-alcohol.

The Java oil does not contain any of this alcohol or only in minute quantities, thereby characterizing it. The fresh oil has a specific gravity of 0.970-0.995, and dissolves to a clear solution in equal parts of 90 per cent. alcohol. If more than two parts of alcohol are taken a turbidity may appear, which must however disappear on dilution up to four or five parts. The wild and the cultivated herbs are often baled together, as the oil of the former differs very little from that of the latter; but this mixing is not liked by the distillers, as they may still frequently give different results.

Another plant also supplies a kind of patchouli oil, the Dilem patchouli. It possesses a musty disagreeable flavor and cannot be used to replace the real article. It frequently has a strong side odor, reminiscent of turpentine. Some years ago a planter ordered plants of patchouli from a foreign country, and planted several hectares with it; but after the crop, he found he had planted the valueless Dilem herb. He had been cheated. The plants, however, are so similar in appearance that even experts sometimes are not quite sure as to which kind of plant they have to deal with.

Since the distillation of patchouli oil in India has been discontinued as unprofitable, and Europe only takes care of the distillation, the oils appearing in trade are much more reliable. The prices also have remained moderate, so that there is no obstacle in the way of a large consumption of this strong scenting oil. The researches on patchouli oil have also been carried pretty far, although a substitute for it has only found partial success, replacing it only in case of necessity. It is interesting to know that it has been found that there are 95 per cent. of various substances in the oil which do not possess the characteristic odor of patchouli oil. These, therefore, may be eliminated from its valuation, but the same can be said, however, of other ethereal oils, such as neroli oil, jasmine oil, and orris oil.

USES OF THE PATCHOULI OIL: A pronounced patchouli scent is only popular in a very few cases like in the export business to tropical countries where we find it as a well-liked article. This is only natural, for in these southern countries, the whole atmosphere seems to have a richer flavor of its own than in the north, where the air seems to be lighter and thinner. The scent of patchouli also is used with good results to combat the frequently very obtrusive scent of the perspiration, completely suppressing it.

Patchouli scent gives a fine shade to various combinations, without, however, being obtrusive. It is therefore very valuable as a so-called "fixing" agent. In suitable proportions mixed with Bourbon geranium oil and some vanillin, a very fine quality of goods may be produced without much expense. With finer perfumes, the expensive otto of roses and some neroli oil may be used. Vanillin is a very good covering agent, but as it turns brown very easily on exposure to light, large quantities of it cannot be used. Heliotropin, on the other hand, is not strong enough to cover the proper scent of the patchouli oil; also when used in larger quantities, it is liable to crystallize out.

We distinguish between fine and ordinary patchouli scents. For the former, otto of roses is used, together with infusion of jasmine, orange, also cassia, fine musk and labdanum. Now and then oil of vetiver is added. For cheaper qualities, acetate of benzyl is a very good material, it aids in dissipating the severe odor and is frequently used for this purpose. With very cheap articles oil of cloves is worked in and so is artificial musk. The alcohol content should not go below 65 per cent. with the cheaper qualities, as the possibility of turbidity is too strong, thereby making the perfumes unsalable.

Besides patchouli perfumes, patchouli toilet water also is used. This is especially popular with the harem ladies of

Turkish and Arabic Pashas, who pay enormous prices for fine qualities. These toilet waters are worked with infusion of jasmine, but there are also some to be found in trade containing menthol, which gives an odd shade, and is very well liked. Otto of roses also is added and so is some fine kananga oil, all in combination with the finest patchouli oil, thus preventing its domination.

These toilet waters are made up in flasks holding about 140 grams, with metal stoppers, each flask within a pretty box. Flask and box bear embossed vignettes representing a rich oriental lady or a beautiful scene from a bath in the harem.

Patchouli oil therefore is very well able to find many uses in perfumery, and no perfumer should fail to experiment with it, not only in order to produce actual patchouli perfumes, but also to invent, by happy combinations, especially fine patchouli oil perfumes.

ESSENTIAL OILS IN DRUG MARKET.

Pennsylvania Pharmaceutical Association's Committee on the Drug Market has just made a report from which the following extracts are taken:

Oil of Aniseed, U. S. P. All of the samples were of the U. S. P. quality with the exception that one sample was optically inactive. A trace of lead was detected in three samples.

Oil Cloves, U. S. P. The 9 lots examined were all above the U. S. P. standard of 80% eugenol, ranging between 80.0% and 82.0%; the specific gravities were between the U. S. P. limits of 1.040-1.060 at 25° C., ranging from 1.040 to 1.056 at 25° C.; and answered all other U. S. P. requirements.

Oil of Eucalyptus, U. S. P. This oil had a satisfactory appearance but it had rather an objectionable odor. Its specific gravity was slightly above the maximum limit of the U. S. P. It also was unsufficiently soluble in 70% alcohol as it required 5½ volumes to make a clear solution, whereas the U. S. P. specifies that only three volumes should be required.

In addition to the sample just discussed there was another one which answered the U. S. P. requirements with the exception that it had an optical rotation of —1° 49′ instead of the dextro-rotation of not more than plus 10°, as specified in the U. S. P.

Oil of Linseed, U. S. P. An examination of one sample of Linseed Oil used for core making and sold as pure oil revealed a condition of gross adulteration. No extended examination was made but mineral oil, rosin oil, and fish oil were found.

Oil, Olive, U. S. P. The 6 samples examined had specific gravities ranging between 0.9100 and 0.9116 (U. S. P. requires 0.910-.915); iodine numbers ranging between 81.2 and 84.2 (U. S. P. requires 80-88); 3 of the 6 had saponification numbers slightly below U. S. P. lower limit of 191, namely, 190.4, 190.4, and 190.6, the other 3 were 192, 194 and 194.5; none responded to the U. S. P. nitric acid test; and all 6 answered all other U. S. P. requirements.

Oil Orange. The optical rotation of the 8 lots examined ranged between plus 95.0° and plus 97.1° (U. S. P. equals not less than plus 95.0°). One lot marked "distilled by steam from marc of an orange peel preparation" answered all U. S. P. requirements, except of course method of manufacture, and the odor was inferior to that of an expressed oil.

Oil Peppermint, U. S. P. The optical rotations of the 18 samples examined were all within 5.1° of each other, ranging from —20.7° to —26.8°, while the U. S. P. allows a range of 13°, namely, from —20° to —33°. A few of the samples contained traces of dimethyl sulphide.

Oil Sandalwood, U. S. P. The optical rotations of all the samples examined during the past year ranged between the —16.0° and —20° required by the U. S. P.; the specific gravities from 0.969 to 0.971 (U. S. P. 0.965-0.980); Santalol from 92.3% to 95.2% and answered all other U. S. P. requirements.

One lot was examined which was not completely soluble in three parts of 70% alcohol as specified in the U. S. P. In connection with the performance of this test it was noted that 0.5° C. exerts an influence on the solubility; for instance, this oil was not soluble in three parts of 70% alcohol at 25° C., but a clear solution was obtained at 25.5° C.

AN EXAMINATION OF THE ESSENTIAL OIL OF WITCH HAZEL.*

By H. A. D. Jowett, D.Sc., and F. L. Pyman, Ph.D., D.Sc.

The only previous investigation was carried out by Wilbur L. Scoville, whose results are as follow: "Two samples of the oil obtained from different lots of the grease or crude distillate were examined, and showed the following characteristics: Specific gravity at 25 degs., 0.8984 and 0.8985; refractive index at 20 degs., 1.4830 and 1.4892; rotation + 4.6 degs. and + 5.05 degs.; saponification equivalent 3.80; saponification equivaleqt after acetylation 30.3. The greater portion of the oil distilled between 250 degs. and 263 degs.; 10 volumes of official alcohol were required for solution at 25 degs. The oil evidently consists chiefly of a terpene with a small proportion of an alcohol (about 7 per cent.), and a still smaller amount of an ester."

The authors' results are in fair agreement with those of Scoville. The chief constituent is a sesquiterpene having $d = 0.8790$ α_D + 14.88 degs. and $n = 1.4916$. A trace of a phenolic substance, a mixture of fatty acids, free and combined, and a mixture of solid saturated hydrocarbons were also isolated, whilst indication of other compounds were also obtained. The oil employed was specially prepared for the authors from pure hazel twigs. It is present in minute proportion only. The oil was golden brown in color. It had $d = 0.9001$ at 15.5 degs. α_D + 4.29 degs. in a 1 dem. tube. It was thoroughly soluble in 90 per cent. alcohol, and when mixed with a little absolute alcohol gave a small colorless precipitate. It contained 0.6 per cent. of acids calculated as acetic acid and 7.3 per cent. of esters calculated as $C_{10}H_{17}C_2H_3O_2$. The total amount available for analysis was 43 grammes.

DISCUSSION.

The president felt that they were much indebted to Drs. Jowett and Pyman and to the "Wellcome" Research Laboratories for their work on witch hazel. From the negative results it was evident that the matter must be still left on the Research agenda.

Dr. Power asked if the water from which the oil had been separated had been examined, as some of the constituents of essential oils are present to a much larger extent in the water from which the oil has been separated than in the oil itself.

Mr. Finnemore asked if Dr. Jowett could throw any light on the alleged aldehydic constituent which was said to have been isolated from the leaves.

Dr. Jowett replied to Dr. Power that they had simply separated the oil from the aqueous distillate. The aqueous extract had previously been examined. In reply to Mr. Finnemore, he was unable to throw any further light on the matter.

*Read at the meeting of the British Pharmaceutical Conference, London, 1913.

Shaving and Glycerol Soaps.

The use of hardened oil in the manufacture of shaving and glycerol soaps. J. Schaal. Seifensieder Zeitung, 39, 954-5.—Good results may be obtained from the use of hardened oils by using a smaller amount than one would use of tallow. In the manufacture of cold-made shaving soap it is best to saponify at a higher temperature (52°) than is usual (45°).

OIL HARDENING

By CARLETON ELLIS

(Specially written for this journal; must not be republished without permission.)

(*Continued from page* 118, *July*, 1913.)

Erdmann has taken out a German Patent No. 211,669, of Jan. 19, 1907, involving passing an oil as spray or mist into a chamber containing nickel catalyzer supported on pumice and the like. Fig 9 probably indicates one form

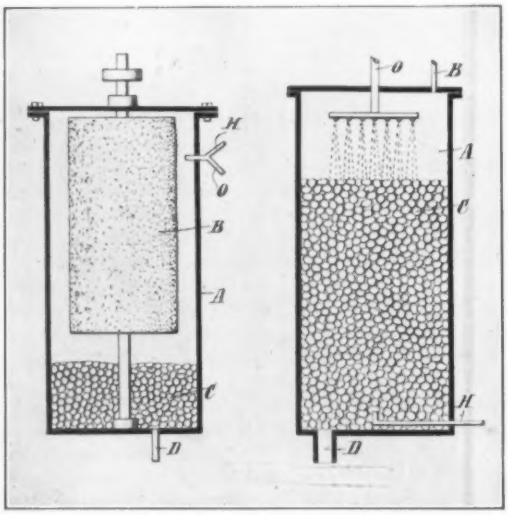

Fig. 9.

Fig. 10.

suggested by Erdmann, who, by the way, does not show any drawings in the patent. The chamber A has a rotatable cylinder, B, which is coated with nickel catalyzer. In the bottom of the receptacle is a quantity of nickelized pumice. Oil enters at O and is atomized by hydrogen entering at H. The atomized mixture impinges upon the rotating cylinder B, then passes through the bed C, the oil being drawn off at D. The excess of hydrogen is presumably vented in the upper part of the apparatus.

A second modification (Fig. 10) involves a tower, A, filled with catalyzer C, which may be in the form of nickel supported on coarse fragments of pumice. By the pipe O, oil is admitted to the chamber in an atomized or finely divided state. Hydrogen enters by the pipe H. Erdmann states that the temperature of treatment should be from 170 to 180° C. The treated oil is drawn off at D while the excess of hydrogen passes away at B.

In a supplemental patent, No. 221,890, of Jan. 19, 1907, Erdman recommends the steam distillation from the reaction chamber of the saturated product under diminished pressure.

Vereinigte Chemische Werke A. G.[1] make use of palladium catalyzer precipitated on an indifferent body as a carrier and recommend as carriers finely divided metals which do not have anti-catalytic properties, also metal oxides and carbonates. Under these circumstances it is stated that one part of palladium is sufficient to convert in a few hours 100,000 parts of oily material to a firm mass. They recommend the use of a hydrogen pressure of two to three atmospheres and a temperature somewhat above the solidification point of the saturated fat. They caution against arsenic, hydrogen phosphide and sulfide, liquid hydrocarbons and carbon bisulfide, chloroform, acetone and free mineral acids as being destructive to the activity of the catalyzer.

Kayser[1] describes a process of treating oil with metallic catalyzer consisting in mechanically agitating the oil and catalyzer in the presence of hydrogen, preferably under pressure. One form of the apparatus indicated by Kayser for this purpose is diagrammatically represented by Fig. 11.

Here A is a closed horizontal cylindrical vessel in which is a paddle wheel, D, made up of blades carrying wire gauze. The paddle wheel is rotated by a driving gear at B. In the upper part of the tank is an inlet for charging oil and presumably also catalyzer, the oil being admitted to

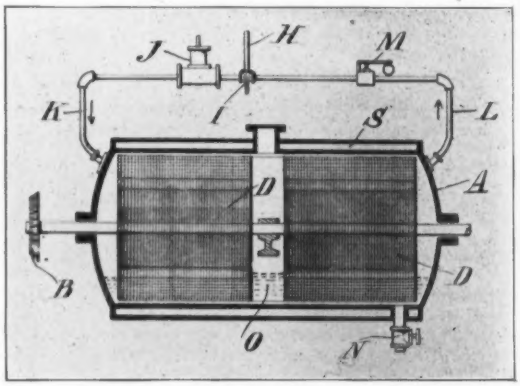

Fig. 11.

the tank in an amount sufficient to fill to perhaps one-fourth or one-fifth the entire capacity. Hydrogen is admitted at H and passes, by the three-way cock I, to the compression pump J, going from there to the treating receptacle. At

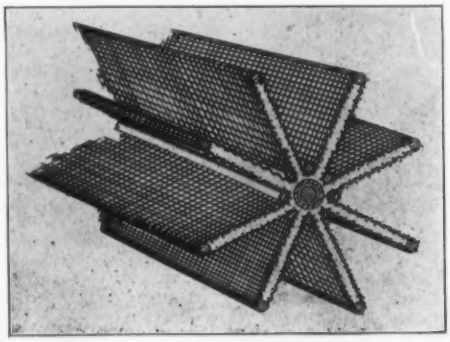

Fig. 12.

[1]German Patent No. 236,488, of August 6, 1910; also English Patent No. 18,642, of 1911.

[1]U. S. Patent No. 1,004,035, of September 26, 1911.

the opposite end of the tank is an exhaust pipe, L, carrying a blow-off valve, M, for the purpose of venting the unabsorbed hydrogen. The temperature of treatment is stated to be about 150 to 160° C. Although the claims call for the use of hydrogen under pressure, no working pressures are specified. Fig. 12 shows diagrammatically one form of construction of the screen-covered paddle wheel used by Kayser.

In another U. S. Patent (No. 1,008,474, of Nov. 14, 1911), Kayser sets forth the use of an inert pulverulent material such as kieselguhr as a carrier for the nickel catalyzer, he apparently having determined, as did Sabatier and others, that hydrogenation is more rapid or complete when a carrier for the catalyzer is used; and he claims the process of hydrogenating oil involving agitation of a metallized inert pulverulent carrier with a fatty oil in the presence of hydrogen. It is commonly understood that the Kayser process is in operation on the large scale in this country.

Two patents relating to the spraying of oil into a chamber containing compressed hydrogen have attracted some attention abroad. One of these is English Patent No. 7,726, of 1910, to Testrup and the other is to Wilbuschewitch which finds its counterpart here in U. S. Patent No. 1,024,758, of April 30, 1912. Fig. 13 shows the elements of the Testrup process.

Oil and catalyzer are pumped through the pipe O, into the tank A, and hydrogen is admitted by the pipe H, to furnish a gas pressure of say 15 atmospheres. The tubes

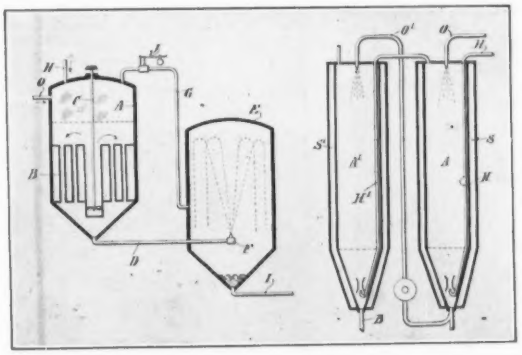

FIG. 13.

FIG. 14.

B are heated by steam and the stirrer C circulates the oil and catalyzer in the tank A, until the oil has become heated and presumably somewhat hydrogenated. The oil is allowed to pass into the adjacent tank E, entering this tank by the spray nozzle F. Hydrogen gas is admitted to the tank E, from the tank A, so as to afford a pressure of, say, 12 atmospheres in the tank E. A series of tanks may be arranged with a constantly decreasing pressure so that the differential pressure enables the spraying of the oil from tank to tank. Testrup states that spraying the material ten or fifteen times is sufficient to bring an oil of an iodine number of 110 down to an iodine number of 50.

As catalyzer, Testrup recommends finely divided palladium or preferably nickel, the latter being two or three per cent. by weight of the oil. As a treating temperature 160 to 170° C. is mentioned.

The Wilbuschewitch patent itself details a rather complicated system, and Fig. 14 shows only what appears to be the essential features of the treating apparatus. Several tanks or autoclaves are connected as shown at A and A', oil entering the top of the tank A by the pipe O, to form a spray which in descending meets an upward current of hydrogen entering by the pipe H. The oil is drawn off through the pipe O', and sprayed into the tank A'. This time it meets a current of hydrogen represented by the excess of hydrogen coming from the tank A. The treated oil is drawn off and may be centrifuged to remove the catalyzer. A pressure of nine atmospheres is recommended and the pressures may be varied in the different tanks.

Of the Wilbuschewitch process Goldschmidt[1] states that the high hydrogen pressures employed enable the reaction to take place quickly at temperatures between 100 and 160° C., so that the fat is not likely to be injured by the temperature to which it is subjected. It should be stated that several years previous to the date of the Wilbuschewitch patent, Ipatiew had noted and carefully studied the action of increased pressure.[1]

Bedford and Williams[2] have brought out an interesting process represented by U. S. Patent No. 1,026,339, of May 14, 1912. Fig. 15 shows the apparatus indicated by Bedford and Williams for carrying out the process. Oil is placed in the receptacle A, which is heated by a steam coil, S.

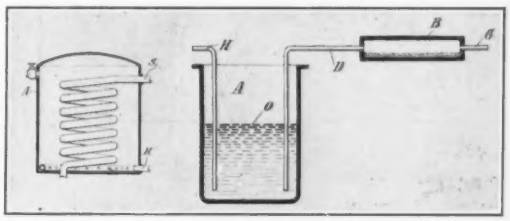

FIG. 15.

FIG. 16.

Metallic *oxide* catalyzer is added, about 1 per cent. being recommended, and hydrogen and oxygen or air is introduced by the pipe H. As a catalyzer, nickel oxide (previously used by Ipatiew) is recommended and instead of the customary hydrogenating temperatures of 150 to 170° C., a temperature of about 250° C. is employed. While hydrogen alone may be used for the purpose, the inventors recommend and claim treatment of the oil with a mixture of hydrogen and oxygen to form hydroxy fatty acids or their glycerides.

Shukoff[4] claims the process of hydrogenating oils by means of nickel derived from the decomposition of nickel carbonyl. Nickel carbonyl may be obtained from reduced metallic nickel by passing carbon monoxide over it at a low temperature. Nickel carbonyl is soluble in oil and is very readily taken up by gases. On heating to a tempera-

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[1] *Chem. Ztg.*, 1912, 945.

[2] Rumor has it that the processes of Testrup and Wilbuschewitch were so much alike that during the prosecution of their patent applications before the English Patent Office, they concluded to unite interests and that subsequently they sold the rights in England to a soap manufacturer who is contesting the claims of the present owners of the Normann patent as to the alleged basic nature of the latter.

[3] It is reported that in England some of the independent soap manufacturers have taken over this patent of Bedford and Williams and also the Erdmann rights. The Bedford and Williams process does not seem destined to be of great service in connection with the manufacture of edible fats, in part owing to the high temperature employed. It is questionable whether or not working with a mixture of hydrogen and oxygen in the presence of a catalyzer might not at times afford conditions leading to explosions.

[4] German Patent No. 241,823, of January 18, 1910. See also H. Kamps, Belgian Patent No. 246,975, *Seifensieder Ztg.*, 1912, 1339. U. S. Patents 738,303, 777,848 and 943,627 are of incidental interest.

ture of 200° or so, the carbonyl is decomposed setting free, in a nascent state, metallic nickel which acts as a catalyzer. Shukoff makes use of this reaction of nickel carbonyl by the method indicated by Fig. 16. Carbon monoxide is passed by the pipe G, into the tube B, containing finely divided nickel and the nickel carbonyl formed is conducted to the oil O, which is heated to about 180°. After sufficient nickel catalyzer has formed in the oil, the carbon monoxide stream is cut off, the temperature raised to 220 or 240° C. and hydrogen gas introduced by the pipe H, to bring about hydrogenation.

Day has taken out U. S. Patent No. 1,004,632, of October 3, 1911, supplementing his earlier patent on the treatment of hydrocarbon oils with hydrogen. In the present instance tubes packed with catalyzer are placed in an oil still in such a manner that vapors from the oil may pass through the catalyzer tube in conjunction with hydrogen while being superheated by exterior contact of the tubes with boiling oil.

An English Patent, No. 23,997, of 1909, to Phillips and Bultell, claims to convert mineral oils into oils of lower specific gravity by heating with hydrogen in the presence of nickel or other catalytic agents. They state that the mixture of oil, gas and catalyst may be blown into a heated cylinder and the jet given a gyratory motion either by means of a nozzle revolving about its axis, or by injecting the mixture tangentially to the periphery. In the latter case they state that the cylinder may have an axial core.

The firm of H. Schlinck & Co., of Hamburg, Germany,[1] hydrogenate oil by passage through a centrifuge, the drum of which carries a porous lining of palladium catalyzer which offers a frictional resistance to the passage of the oil. Fig. 17 shows a centrifugal drum, *a*, which is closed at the top and can be heated. Oil and hydrogen are introduced through the pipe *b*. Openings are provided in the walls of the drum in which is placed rough or porous material covered with precipitated palladium. Several drums may be arranged in series through which the oil may be caused to progress until sufficiently hydrogenated.

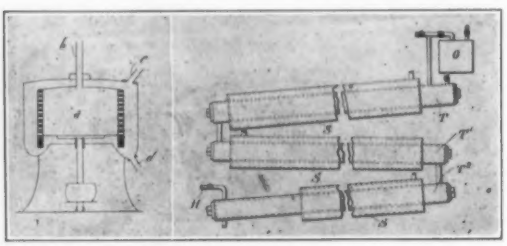


FIG. 17. FIG. 18.

Ellis[2] uses a stationary catalyzer, filling tubes with the material in granular form and allowing oil to flow through the tubes while passing hydrogen in an opposite direction. Fig. 18 shows a three-section apparatus with the catalyzer tubes T, T^1 and T^2, heated by the jackets S S. Oil from tank O flows through the apparatus while hydrogen, admitted by the pipe H, passes through in an opposite direction. The arrangement permits of differential heating so that, for example, the oil may be heated to a temperature corresponding to its particular degree of hydrogenation at any given point, enabling a hydrogenated product free from burnt odor to be obtained. Fig. 19 shows a vertical form of apparatus, the catalyzer being shown at C in the tube A. Oil is introduced by the pipe O, and passes into the tube or cylinder A. The pump P causes oil to circulate from the top to the bottom of the apparatus through the pipe B. Hydrogen gas admitted at H is pumped into

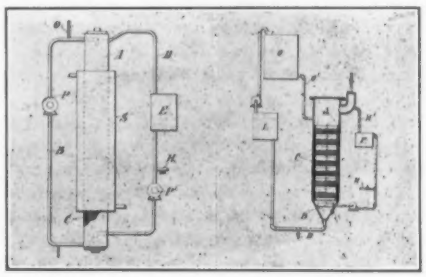


FIG. 19. FIG. 20.

the bottom of the cylinder A, and the excess is withdrawn at the top by the pipe D, passing through the drier E, and back into the treating cylinder. Oil may be continuously fed through the pipe O, in the upper part and treated product withdrawn at the same rate at the lower part of the apparatus.

In Ellis[3] Patent, No. 1,040,531, of October 8, 1912, the catalyzer is placed in trays or baskets as shown by Fig. 20 at C. The oil travels in a cyclic path downwardly through several layers of catalyzer, and hydrogen gas passes in an opposite direction. Separation of the catalyzer in layers in this manner enables the hydrogen to pass more uniformly through the catalyzer bed. If the catalyzer forms a bed of considerable depth and width, the gas in taking the path of least resistance is liable not to come in contact with some parts of the bed.

The activity of a properly made catalyzer is oftentimes surprising. In the case of a stationary catalyzer we have noted instances of hydrogenation where oil is converted into a hardened fat by momentary contact with the catalyzer.

Fig. 21 shows a photograph of a small laboratory apparatus for testing catalyzer consisting of an inclined tube containing catalyzer and carried in a heating jacket. Oil is admitted at the right and hydrogen at the left hand end. Fig. 22 shows the catalyzer tube at the right from which extends a horizontal tube supplying hydrogen to the catalyzer tube. (See next page for figure 21.)

Recently when using a new type of catalyzer we started to pass oil through the catalyzer tube and found hydrogen to be absorbed so vigorously by the oil that instead of passing off through an oil seal at the lower end of the inclined catalyzer tube, the oil, curiously enough, was impelled against the strong current of hydrogen passing through the horizontal tube, rushing through it to the point indicated by the hand of the operator (Fig. 22) and there solidifying, actually being well hydrogenated from its momentary passage through the apparatus. A peculiar feature was the advance of the oil from the tube containing catalyzer far into the tube through which only the hydrogen was entering the apparatus. The travel of the oil along the hydrogen supplying pipe in opposition to a rapid current of hydrogen, indicates the possibility of

[1] English Patent No. 8,147, of 1911.
[2] U. S. Patent No. 1,026,156, of May 14, 1912. See also U. S. Patent No. 1,052,469, February 11, 1913.

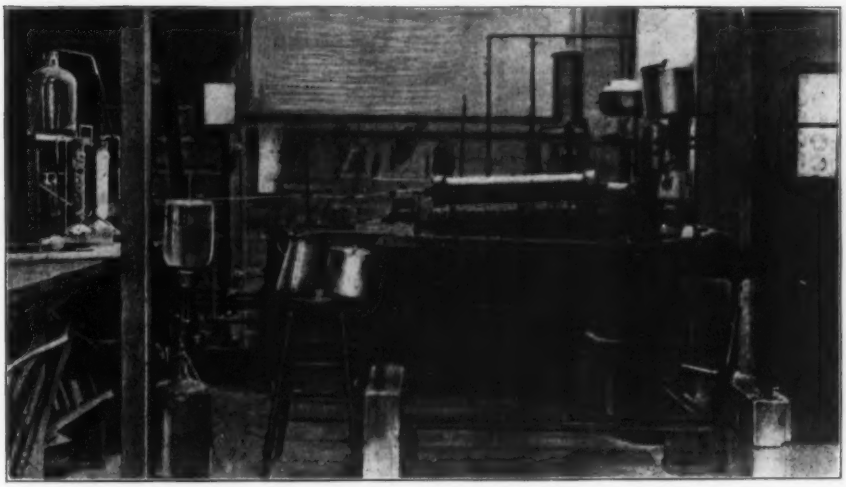


FIG. 21.

hydrogenating in a very short time, provided a catalyzer of a high degree of activity is secured.

On the other hand, some catalyzers of the nickel and cobalt type when first brought into contact with oil and hydrogen show for a time a marked degree of sluggishness, but after a period, usually ranging from one to three hours, their activity rather suddenly augments and thenceforth remains apparent for a long period. This sluggishness should not be confounded with the seeming initial inactivity in the hydrogenation of oils containing con-

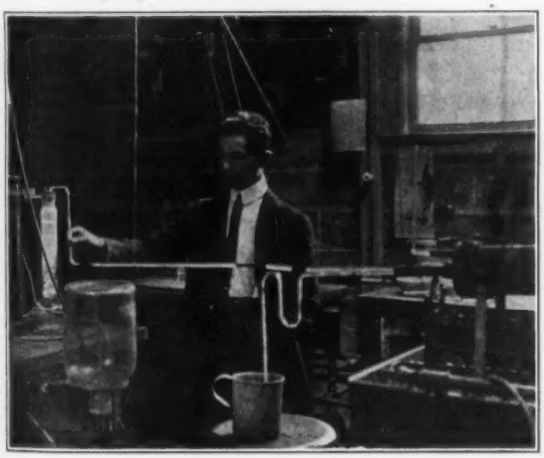


FIG. 22.

siderable linolein or other highly unsaturated bodies. In such cases the rate of "hardening" (increase in melting point) is slow at first and later progresses more rapidly. Hydrogenation, in some cases at least, apparently proceeds selectively with initial formation of olein from linolein. Later the olein is transformed into stearin with the observed more rapid increase of titer.

Ellis[1] effects a constant circulation and contact of the hydrogen gas in accordance with the method shown by Fig. 23. The tank A contains a body oil, O, the space above the oil being filled with hydrogen under any suitable pressure. The tank is heated by the jacket S. A pump, P, withdraws the hydrogen from the upper part of the tank and impels it through the pipe D, into the lower part of the tank. Catalyzer is added to the oil when the proper temperature is reached and the constant bubbling of a stream of hydrogen through the oil causes intimate contact between the roasting elements. After the operation is completed, the porous plate, fastened to a movable stem in the upper part of the tank, may be depressed to fit into the bottom of the conical base so that when the oil is withdrawn a good portion of the catalyzer remains without exposure to the air and may be used with perhaps a small

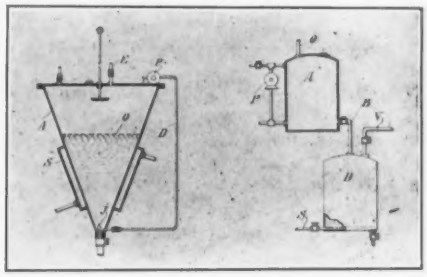


FIG. 23.

FIG. 24.

addition of fresh catalyzer for the treatment of a succeeding charge of oil.

In U. S. Patent No. 1,043,912, Ellis hydrogenates oil (Fig. 24) in the autoclave A. The pump P circulates hydrogen gas through the oil. The treated product is run into the deodorizer D, where it is treated with superheated steam under diminished atmospheric pressure until the oil is freed from noxious gases or vapors. While the deodorization of ordinary cottonseed oil, for example, requires a temperature from 200 to 300° C. and a vacuum of down to one or two inches mercury, the deodorization of the hydrogenated cottonseed oil does not necessarily

[1]U. S. Patent to Ellis No. 1,059,720, of April 22, 1913.

require as high a temperature and the vacuum "pulled" may be considerably less.[1]

Contrary to the opinion entertained by many it does not appear needful to agitate the catalyzer primarily for the purpose of contacting it with hydrogen. Once the catalyzer is wetted with the oil there can no longer be any actual contact with the gas. Hydrogen reaches the catalyzer seemingly only through solution in the oil. The forces of adhesion effectually seal the catalyzer surface from the gas, and no measure of agitation by ordinary mixing apparatus will dislodge the film of oil. Of course, agitation secures the rapid replacement of more saturated by less saturated portions of the oil, but this replacement, under certain conditions, may proceed just as rapidly, simply by diffusion.

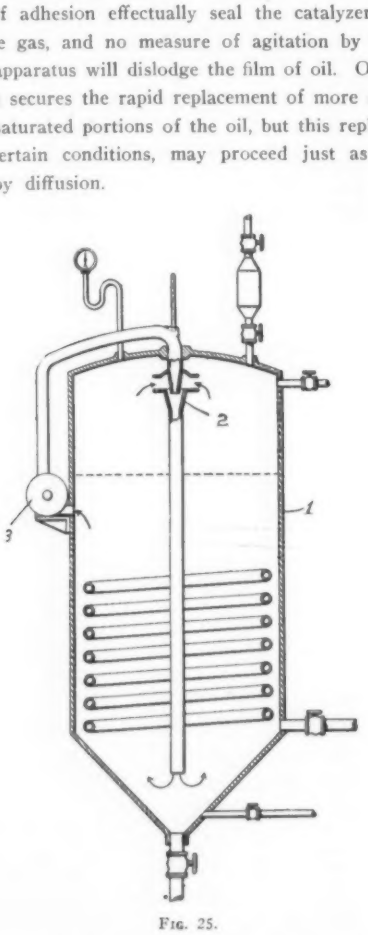


FIG. 25.

The direct pumping of hot hydrogen gas, especially if the latter is under considerable pressure, offers some difficulties, and the apparatus shown in Fig. 25 is designed to effect a circulation of the gas by inductive effect.[2] The tank 1 carries an inductor 2 through which is forced oil propelled by the pump 3. The passage of the oil through the inductor causes hydrogen, which is supplied to the upper part of the tank, to be drawn into the central vertical pipe and carried with the oil to the bottom of the tank when the gas bubbles through the main body of oil. Thus the oil which is being treated is made use of to circulate the gas.

(To be continued.)

[1]U. S. Patent to Ellis No. 1,059,720, of April 22, 1913.

LEMON OIL IN SOUTHERN ITALY.

Consul Hernando de Soto, at Palermo, sends the following interesting information, which is taken in part from a report recently published by Schimmel & Co., Miltitz, Germany, covering the trade in lemon oil in southern Italy and Sicily in 1912, and in part from a review compiled by the Chamber of Commerce of Palermo.

The trade in lemon oil in southern Italy and Sicily had to contend with exceptionally difficult conditions during 1912. Several things combined to affect this trade adversely. Although the stock out of the preceding campaign carried over during the winter 1910-11 exceeded 220,460 pounds, only 66,138 pounds of oil remained on hand at the close of 1911. During 1912 this stock was not only exhausted but the entire new production of 1911-12 was also sold. Thus the demand during 1913 will have to depend solely upon the new production of 1912-13.

Prices for lemon oil out of the old stock (1910-11) rose from $1.40 in June, 1912, to $1.67 a pound in September, 1912, and new oil from $1.15 to $1.53 a pound. However, when it was noticed that the old stock was shrinking rapidly toward the close of the year, speculation started promptly, driving the price up to $2 per pound in December, 1912. Since January, 1913, the price has been steadily increasing, the quotations in the June number of the Palermo Chamber of Commerce Bulletin being $2.69 to $2.93 a pound.

It is estimated that during the coming season there will be a shortage of at least 30 to 35 per cent. of lemon oil in the market. It is therefore safe to predict that toward the close of 1913 it is hardly likely that there will be any stock left when the new production is put on the market, and for that reason prices are apt to rule high during the whole next campaign 1913-14, no matter how plentiful the new production may turn out.

The enormous increase in the price of lemon oil during the last five months has caused considerable embarrassment among the exporters, who have suffered severe losses. These losses were caused by the fact that many manufacturers, attracted by the high prices which had almost doubled as compared with the prices at which they had contracted for with the exporters, either did not fill or only in part filled such contracts, so that the exporters in order to satisfy in turn their foreign customers were compelled to pay the manufacturer the high prices, without being able to charge same to their customers with whom they had closed so-called "speculation contracts." This experience will probably lead to an entire change in the system of handling lemon oil in the future.

The total exports from Palermo of citrus fruit essences (including a very small percentage of orange or mandarin oil) during 1910, 1911, and 1912 were 276,502, 171,428, and 121,006 pounds respectively.

"Australian Sassafras" Oil.

The Essential Oil of the Leaves of Atherosperma moschatum ("Australian Sassafras"). Margaret E. Scott. Journal Chemical Society, 101, 1912-3.—The yield of oil from the fresh leaves varied in different samples from 1.7 to 2.65%. The first portion, about 30%, was lighter than water, while that subsequently passed over was heavier. The mixed oils show d. 1.027; $(a)_4$+7.5°; n_4 1.5211. The oil contained the following compounds in approximately the proportions indicated: Eugenol methyl ether, 50—60%; pinene, 15—20%; camphor, 15—20%; and safrol, 5—10%.

PROPORTION AND COMPOSITION OF THE ALCOHOLS IN GERANIUM OILS*

By W. H. Simmons, B.Sc. (Lond.), F.C.S.

Although the alcoholic constituents of geranium or pelargonium oils have now been shown by Schimmel to be rather numerous, linalol, phenyl ethyl alcohol, a-terpineol, menthol and amyl alcohol having been found, in addition to geraniol and citronellol, the two latter, in the free and combined state, form the main constituents of the oils, and, hitherto, but little attempt has ever been made to differentiate between these, any reference in an analysis of geranium oil to the alcoholic constituents being almost invariably confined to the percentage of total alcohols, as determined by acetylation, and calculated as geraniol. The only exception to this to my knowledge is the work of Messrs. Jeancard and Satie on the separation of the citronellol from the other alcohols by treatment with 98 to 100 per cent. formic acid, a process, I believe, first proposed for the analysis of otto of rose by Schimmel, which is stated to convert citronellol into citronellyl formate, and the other alcohols into terpenes. Their investigations do not appear to have received much publicity in this country, and the following notes deal with some attempts to discover whether the process actually determines the true percentage of citronellol, or whether it is of empirical value in comparing different geraniol oils. Theoretically, of course, it seems scarcely probable that the citronellol could be completely esterified by merely boiling with formic acid, as an equilibrium point would almost certainly be reached, beyond which esterification would not proceed.

Before coming to these experiments, however, it may be useful to briefly refer to the matter of total alcohols, calculated as geraniol. The following limits have been suggested for African and Bourbon (or Reunion) oils:

African.	Bourbon.	Authority.	Reference.
66 to 77	68 to 78	Schimmel.	Semi-Annual Report, October, 1911, p. 52.
	75 to 85	E. J. Parry	"Chemistry of Essential Oils."
68 to 76	68 to 74	Jeancard and Satie	A small brochure on Essential Oils published in French.

So far as my own experience goes, extending over several years, I find that while Schimmel's limits cover most genuine oils of both varieties, the total alcohols in a Bourbon oil rarely fall below 70 per cent., but frequently lie between 70 and 75 per cent., though occasionally approaching 80 per cent.

The formylation process, as recommended by Messrs. Jeancard and Satie, consists in heating 10 cc. of oil with 20 cc. of 98 to 100 per cent. formic acid in a flask attached to a reflux condenser for one hour on either a water-bath or a sand-bath. In one of their publications a water-bath is referred to, but in a private communication to myself they state that a sand-bath should be used. A few comparative determinations have, therefore, been made, using both methods of heating, but this appears to have little effect on the result, and as when the mixture of oil and formic acid is boiled on a sand-bath considerable bumping occurs, heating on a water-bath is much to be preferred. It may be mentioned here that the addition of 2 grms. anhydrous sodium formate per 10cc. oil, while it enables the mixture to be boiled steadily on a sand-bath, does not affect the result.

To prove whether the results obtained represent the true citronellol content, I have determined the "total alcohols" by acetylation, and the "citronellol" by formylation of (1) Schimmel's geraniol, (2) Schimmel's citronellol, and (3) a mixture of (1) and (2) in equal proportions, with the following results:

	"Total alcohols, as geraniol."	"Citronellol."
1. Geraniol	99.5 per cent.	13.7 per cent.
2. Citronellol	100.4[1] per cent.	83.4 per cent.
2. Mixture of 1 and 2.....	—	47.9 per cent.

Formylation of a sample of Palmarosa oil also gave an apparent citronellol content of 14 per cent. From these results it is evident that, assuming the above samples to represent 100 per cent. geraniol and 100 per cent. citronellol, formylation does not do either of the things it is assumed to do, i. e., it does not completely convert geraniol into terpene, and it does not completely esterify citronellol.

To ascertain the value of the process as a comparative test a number of African and Bourbon geranium oils have been examined by the two processes, with the following results:

	Total Alcohols as Geraniol. Per cent.	Citronellol. Per cent.	Percentage Composition of Alcohols. Geraniol.	Citronellol.
African.....	72.8	40.0	45	55
"	70.0	42.8	39	51
"	79.5	33.4	58	42
"	69.3	32.0	54	46
"	69.6	34.8	50	50
"	76.8	33.6	56	44
Bourbon....	73.0	50.2	31	69
"	71.7	44.0	39	61
"	70.4	46.8	34	66
"	69.7	51.0	27	73

These results may be tabulated as follows:

	Citronellol. Per cent. on Oil.	Percentage Composition of Alcohols. Geraniol.	Citronellol.
African	32 to 43	39 to 58	42 to 61
Bourbon	44 to 51	27 to 39	61 to 73

Compared with the following figures given by Messrs. Jeancard and Satie:

	Citronellol. Per cent.	Percentage Composition of Alcohols. Geraniol.	Citronellol.
African	37 to 43	40 to 50	50 to 60
Bourbon	50 to 65	20 to 40	60 to 80

While, therefore, I confirm Messrs. Jeancard and Satie that Bourbon oil contains more citronellol than does African oil, I do not find quite so much citronellol in Bourbon oil as they do. From these results the process appears to be of considerable utility in judging of the quality of a geranium oil, though I propose shortly to investigate the subject further, using the phthalic anhydride method for separating citronellol from geraniol.

In conclusion, it may be of interest to give the corresponding figures obtained for three less common varieties of geranium oil:

	Total Alcohols as Geraniol. Per cent.	Citronellol. Per cent.	Percentage Composition of Alcohols. Geraniol.	Citronellol.
Asian	—	63.9	—	—
Corsican	69.8	30.3	57	43
Trappe de Sta	71.5	27.9	61	39

I desire to acknowledge with thanks the help of my assistant, N. J. Llewellyn Parker, who has carried out several of the determinations in this paper.

*Paper read at the meeting of the British Pharmaceutical Conference, London, 1913.

[1] Or, calculated as citronellol, 101.6 per cent.

METHODS FOR THE ANALYSIS OF CASTILE SOAP.*

JOSEPH L. MAYER, Ph. G., Pharm. D., New York City.

Aside from the fact that the sale of a spurious castile soap may subject the seller to legal prosecution, its use causes the difficulty so frequently encountered in preparing soap liniment, and as many soaps sold as castile are not what they are labeled it is necessary to subject samples to analysis in order to determine whether they are properly made olive oil soaps.

In my own work I have employed the following methods with excellent results:

Sampling. Select a sample which is representative of the whole lot or bar. If in the latter form, shavings should be taken from different parts, such as the outer and inner surfaces, and after being thoroughly mixed kept in a tightly corked bottle from which samples are taken for analysis.

Water. The method of U. S. P., that is, taking 0.500 gram of sample, placing in a previously tared beaker containing 1 gram of sand, adding 10 cc. of alcohol and evaporating to dryness and then drying at 110° C. to constant weight is entirely satisfactory. Care must be exercised in heating to conduct the evaporation on a water bath and to employ a small flame, otherwise the sand may be very forcibly ejected from the beaker and the determination ruined.

The quantity of water allowed by the Pharmacopœia, 36 per cent., is excessive and should be very much reduced.

Tests for Animal Fats. The Pharmacopœia states that if a four per cent. alcoholic solution of soap be allowed to cool it should not gelatinize, indicating the absence of animal fats. The most satisfactory method of carrying out this test is to place the alcohol and soap in an Erlenmeyer flask and heat on a water bath, employing a reflux condenser to prevent evaporation. When solution is complete the material is allowed to cool to room temperature (not below 20° C.).

This test is not very satisfactory as the Pharmacopœia allows 36 per cent. of water and as most samples do not contain that much, it is easy to see that instead of a four per cent. solution one may have almost any strength, depending upon the quantity of moisture, the result being that the solution gelatinizes and indicates animal fat, where none was used.

Therefore the Pharmacopœia should provide tests to determine the origin of the fat employed in making the soap, such as determining the iodine number of the fatty acids and their melting points.

Separation of the Fatty Acids. To a portion of the soap dissolved in water add an excess of diluted sulphuric acid and heat on a water bath until the fatty acids rise to the top in a clear layer, then cool in ice water and when the fatty acids have solidified pour off the water. Repeat this heating and cooling process twice, then filter through paper wetted with water; this will retain the fatty acids which after drying are ready for the tests.

Iodine Number of Fatty Acids. Determine the iodine number of fatty acids as directed by the Pharmacopœia for fats and oils. The writer employs the Hanus method, and as suggested by him (Drug. Circ., 1910, page 106) this should be adopted as the official method because of the keeping qualities of the solution and the shorter time required to make a determination. Having determined the iodine number of the fatty acids a reference to Allen's Organic Analysis will indicate the fat or oil which was employed in the preparation of the soap.

Melting Point of Fatty Acids. Take some of the fatty acids prepared as above, gently melt and immerse the bulb of a thermometer in the liquid; in a few seconds it will have congealed and all that remains is to put the thermometer through a cork in an ounce wide-mouth bottle and then suspend the bottle and thermometer in a beaker of water and heat the water slowly. The melting point is regarded as the time when the material forms a clear drop on the tip of the thermometer. Allen's Organic Analysis gives the melting points of various fatty acids.

Tests for Silica and Other Insoluble Matter. The Pharmacopœia determines these by dissolving 20 grams of soap in hot alcohol, washing with hot alcohol, then with hot water and weighing the insoluble residue as silica. A better plan is to take 5 grams of soap, dissolve in about 150 cc. hot water and collect the insoluble matter on a tared ashless filter paper and after washing with hot water drying at 105° C. and weighing. The increase in weight of the filter paper indicates the total insoluble matter. After igniting the residue represents insoluble mineral matter.

Sodium Carbonate. The Pharmacopœia directs 20 grams of soap to be dissolved in hot alcohol and poured on a tared filter paper; the increase in weight of the paper after washing with hot alcohol is regarded as sodium carbonate, silica, etc. After pouring water on this the residue is silica and other insoluble matter; the difference between the two being regarded as sodium carbonate.

Free Alkali. If upon adding a few drops of alcoholic solution of phenolphthalein to the freshly cut surface of the soap a pink color is not developed, the absence of free caustic alkali is indicated.

The Pharmacopœial method of determining alkalinity is inexact and indefinite.

The method of determining sodium carbonate as above directed can with slight modification be employed for the quantitative determination of free alkali.

In place of 20 grams, take 2 grams of soap, dissolve in about 150 cc. of hot neutral alcohol and filter. After washing the filter thoroughly with hot neutral alcohol add phenolphthalein to filtrate and titrate with N/10 H_2SO_4. The alkalinity found is calculated as free alkali due to sodium hydroxide. The material insoluble in alcohol is then dissolved in water and titrated with N/10 H_2SO_4, using methyl orange as indicator. This alkalinity is calculated as free alkali due to sodium carbonate.

If the soap contains both free alkali and free fat the heating with alcohol will influence the result and for that reason it is often advantageous to follow Devine's method of determining free alkali (Journal American Chem. Soc., 1900, page 693), which is carried out as follows:

Weigh 2 grams of soap into a 300 cc. flask, add 50 cc. of alcohol, and excess of N/10 stearic acid in alcohol, a few drops of phenolphthalein solution, connect with a reflux condenser and place the whole on a water bath for half an hour. The stearic acid should constantly be in excess, indicated by the solution remaining colorless. The excess of acid is determined by means of N/10 alcoholic KOH, the difference is the amount required to combine with the total free alkali in the 2 grams of soap taken.

One cc. N/10 acid is the equivalent of .00397 gram caustic soda or .00526 gram sodium carbonate.

Should it be necessary to determine what quantity of the above is free caustic alkali and what quantity is carbonated, Devine's method provides that a second determination similar to the first be started and having calculated the total alkali from the first determination as sodium carbonate add barium chloride to precipitate the alkali, heat a few minutes and after adding phenolphthalein titrate with N/10 stearic acid. This figure represents the cc. required to neutralize the caustic alkali in the soap and the difference between this and the total alkali will correspond to the carbonate.

Refractive Index of Fatty Acids. The determination of the refractive index of the fatty acid often gives valuable information with reference to the origin of the fat em-

*Read before the Kings County Pharmaceutical Society, May 13, 1913.

ployed in making the soap. This determination is easily made if a refractometer is at hand.

More tests could be applied by the pharmacist to enable him to differentiate genuine and spurious olive oil soaps; the above in addition to being sufficient are simple, accurate and easily performed and should therefore be considered for inclusion in the Pharmacopœia.

THE ESTIMATION OF KETONES IN ESSENTIAL OILS.

By H. Labbé.

In general the estimation of ketones in essential oils is not so accurate as that employed for aldehydes, for only in special instances are the reactions of these bodies toward the analytical reagents so complete as to be of quantitative exactness. The most common method employed is that of Benedikt and Shache who determine the carbonyl content by means of a measured excess of phenylhydrazine. The amount of this consumed by the carbonyl group present in the ketone of the oil is reckoned to the "carbonyl index" which expresses in tenths of a per cent. the oxygen present as carbonyl. This method while good for the ketone of essential oil of rue (methyl-nonyl-Vetone) fails for the estimation of the ketones of cassia, fennel, etc., and resort is had to another for these bodies.

The bisulfite method of Schimmel is here employed. It is based on the property of aldehydes and Vetones forming soluble compounds with hot concentrated solutions of sodium bisulfite, while the other constituents present with them in essential oils remain insoluble. The method is applicable to cinnamic aldehyde in oil of cassia, but to such ketones only as form bisulfite derivatives readily soluble in water.

The sulfite method resembles this. Certain aldehydes and ketones yield readily soluble compounds with neutral sulfite of sodium, liberating caustic soda in the reaction. The interfering effect of this latter is overcome by the addition of dilute acid. Neumann first suggested this method of ketones in 1898 while Sadtler extended its application. The method is particularly adapted with proper modifications to the assay of carvone in oil of caraway.

In the Berger modification of the neutral sulfite method 5 cc. of oil are treated in a small flask with a finely graduated neck. A 40 per cent. solution of sodium sulfite is added and the mixture treated on the water bath, shaking frequently meanwhile. A few drops of phenolphthalein are added as indicator. The liberated caustic soda is just neutralized with a solution of acetic acid 1:5; then the heating, shaking and acidification being continued until the further addition of sulfite no longer reddens the solution. Water is added to bring the flotant oil up to the graduations and its volume is read off. Multiplying the volume of oil which has dissolved in the process by twenty, we obtain the volumetric percentage of the aldehyde or ketone. The objections to the method are the necessity for heating and agitating at the same time and the difficult reading of the meniscus which is obscured by crystalline accretions at the lower surface of the oil.

The method about to be advanced can be worked in the cold and the delay caused by the repeated neutralizations with acetic acid is removed by the use of bicarbonate of soda in conjunction with the sulfite. This inhibits the formation of caustic soda. The volumetric estimation of carvone in caraway oil is carried out as here described. The pure ketone itself is completely absorbed in four to five minutes in a solution of sodium sulfite and sodium carbonate of proper concentration. Even diluted with hydrocarbons the reaction is complete after a period.

Exactly 5 cc. of the essential oil is placed in a specially constructed flask. This has a volume about 100 cc. and is fitted with a well ground stopper. At the floor of the flask a narrow sealed tube or cylinder projects. This has a round bottom and is graduated from the bottom upwards to 5 cc. in divisions of twentieths while its small section permits of the ready and accurate observation of one fortieth cubic centimetre. After the oil, sodium sulfite and sodium carbonate in solution are introduced until the flask is two-thirds full when it is briskly shaken for 20-30 seconds in a small mechanical agitator or by hand. The flask is then filled and inverted, so that the graduated tube is quite vertical. After some hours a reading is made, the separation of layers being sharp and readily distinguished. The volume of carvone, the ketone of caraway oil, is thus seen by difference. Knowing the density of carvone and that of oil, the gravimetric percentage of the ketone may be calculated from the volumetric reading. Errors due to the absorption of non-ketones in the liquor never exceed 0.5 per cent. even when carvone is present in small amount.

A method of more general application will soon be published.—*Journal de la Parfumerie Francaise.*

COMPOSITION OF VETIVER OIL.

Composition of vetiver oil. F. W. Semmler, F. Risse, and F Schröter. Ber., 1912, 45, 2347—2357.

An oil distilled in Germany from the roots of *Andropogon muricatus* Retz. had the following characters: sp. gr. 1.0239 at 20 degs. C., n_D=1.52552; a_D=+31 degs. An ester was separated from the oil by fractional distillation, and was then saponified with the formation of an alcohol and an acid. The former, styled *vetivenol*, boils at 170 degs.—174 degs. C. at 13 mm., has the sp. gr. 1.0209 at 20 degs. C., n_D=1.52437, and a_D=+34 degs. 30 minutes. The composition is $C_{15}H_{24}O$ and not $C_{15}H_{26}O$ as recorded by previous observers. It is tricyclic and primary, and has one double linkage. The *vetivenic acid* present in the ester boils at 202 degs.—205 degs C. at 13 mm., has the composition, $C_{15}H_{28}O_2$, and is tricyclic. The alcohol was reduced by means of hydrogen in the presence of platinum black with the formation of dihydrovetivenol boiling at 176 degs.—179 degs. C. at 17 mm., sp. gr. 1.0055 at 20 degs. C., n_D=1.51354, and a_D=+31 degs. The original oil also contains bicyclic vetivenol, which boils at 168 degs.—170 degs. C. at 14 mm., has the sp. gr. 1.0095 at 20 degs. C., n_D=1.52058, and a_D=+25 degs. Two hydrocarbons, bicyclic and tricyclic *vetivene*, $C_{15}H_{24}$, were also separated. Vetiver oil distilled in Réunion has much the same composition as that distilled in Germany, but the high-boiling ester of vetivenic acid is absent.

FOOD LAW ALCOHOL ASSAYS.

Alcohol requirement of the pure food and drug law (U. S. A.) and the accuracy of alcohol assays of pharmaceutical preparations. C. H. Briggs. J. Ind. Eng. Chem., 1913, 5, 29—30.

Under the pure food and drug law of the United States it is necessary to state on the label the percentage of alcohol in every pharmaceutical preparation. The first interpretation was that the maximum amount could be stated on the label, a later belief is that the actual percentage must be stated. To meet this requirement it is necessary either to assay every preparation for alcohol or to adjust each individual lot to a standard alcohol content. Sources of error in making alcohol assays are found in (1) measuring the sample, (2) loss on distillation, (3) error in taking the specific gravity, (4) temperature of the solution, (5) the presence of essential oils. Long experience has shown that the error may at times be as much as 1 or 1.5 per cent. of alcohol. The error allowed under the Act is not known.

VARIETIES OF BENZOYLVANILLIC ALCOHOL.

Communication from Mr. Dufour, presented by Mr. Vallerand at the meeting of the Academy of Sciences, February 10, 1913. There are two varieties of benzoylvanillic alcohol; one made by the action of hydrogen in the cold on benzoate of vanillin in the presence of platinum black—Vavon's process—and the other by the action of benzoyl chloride on vanillic alcohol.

These two forms are identical from a chemical standpoint, but they have not the same crystalline form; one is triclinic, and the other monoclinic. They are stable in the cold and suffer no transformation on contact or mechanical action. About 80 degs. C. however, if the two forms are brought in contact the monoclinic variety suffers a transformation to the triclinic.

FLAVORING EXTRACT SECTION

OFFICIAL REPORT OF FLAVORING EXTRACT MANUFACTURERS' ASSOCIATION.

Mr. S. J. Sherer, of Chicago, Ill., president of the Flavoring Extract Manufacturers' Association, has been busy with the affairs of the association this month, but has issued no bulletin for publication.

Mr. Thomas E. Lannen, the attorney of the association, has been extremely active in the interests of the members of the organization. Mr. Lannen has been to Washington to aid in the fight against imposing a duty of any sort upon vanilla beans, and he has been greatly encouraged by the consideration which he received at the hands of the Senators and Representatives in Congress.

Following his investigation of the situation he sent letters to all of the members, in which he advised them as follows:

"The present tariff bill in Congress would impose a tax of 10 per cent. ad valorem on lemon oil, 30 cents a pound on vanilla beans, and 10 per cent. ad valorem on saffron.

"The writer was in Washington a few days ago, and while there investigated this matter to some extent. It is my opinion that it is not too late to make a determined fight, although there is no time to be lost. We may yet gain something at least. I say this with full knowledge of the action taken last week on the tariff bill by the Senate.

"Therefore, I advise you to write at once to the United States Senators from your State and urge them to put these articles on the free list, and also protest against the proposed tax. In writing to your Senators, just tell them your reasons why the articles should not be taxed. Tell them your reasons in your own way, but do it at once.

"Nothing can be gained without a determined effort on the part of all the members of the Association, or at least all of them interested in these articles. Please give this matter your serious consideration and act promptly."

NOTE ON THE STANDARD VANILLIN SOLUTION FOR THE COLORIMETRIC METHOD FOR THE DETERMINATION OF VANILLIN IN FLAVORING EXTRACTS.

Since the publication in the *Journal of Industrial and Engineering Chemistry* of "A New Colorimetric Method for the Determination of Vanillin in Flavoring Extracts," by Otto Folin and W. Dennis, the method has been used in the Kansas State Board of Health Food Laboratory in the analysis of over sixty extracts and a number of samples of known vanillin content.

The method has worked well and has given sufficiently accurate results for judging vanilla extracts but some experiments with the standard vanillin solution seem important enough to be reported.

The directions call for a solution of vanillin of which 10 cc. contain 0.001 gram of vanillin. Experiments have shown that this solution increases, on standing, in its power to produce a blue color when treated with the phosphotungsticphosphomolybdic acid reagent so that after a month it increases to such an extent that determinations on solutions of vanillin of known strength showed only about 75 per cent of the true vanillin content. Such results are illustrated by the following estimations:

Date	Fresh standard	Old standard
1-18-13.....	20.0	15.4
2-24-13(*a*).....	0.501	0.356
Duplicate.....	0.498	0.362

(*a*) This was a solution 0.5000 gram of Merck's refined vanillin (same as used in standard) and 25 cc. of 95 per cent. alcohol in 100 cc.

A very satisfactory standard solution may be prepared by dissolving 2.0000 grams of vanillin in 200 cc. of 95 per cent. of alcohol and diluting to one liter and then using 10 cc. of this solution to make 200 cc. of standard solution when it is needed. Such a solution was made January 18, 1913, and standards made by diluting the strong solution were compared with fresh standards with the results shown in the following table:

Date	Fresh standard	Standard made by dilution
1-18-13.....	20.0	20.2
1-22-13.....	20.0	20.1
1-25-13.....	20.0	20.3
1-29-13.....	20.0	20.1
3-21-13.....	20.0	20.1

These results show that the strong solution will keep for at least two months without showing an appreciable change. It is much easier to make the dilution than to make up a fresh standard each day.

OSCAR E. HARDER.

University of Kansas, Lawrence.

NOTE.—The paper referred to was printed in the AMERICAN PERFUMER AND ESSENTIAL OIL REVIEW, page 162, September, 1912.

PURE FOOD AND DRUG NOTES.

In this section will be found all matters of interest contained in FEDERAL AND STATE official reports, newspaper items, etc., relating to perfumes, flavoring extracts, etc.

FEDERAL.

Notices of Judgments Given Under Pure Food and Drugs by the Secretary of Agriculture.

2093.—Haarmann Vinegar & Pickle Co., Sioux City, Iowa; adulteration and misbranding of vinegar; pleaded guilty to counts 1 and 4 of the information charging adulteration and fined $25 on each said counts with costs Counts 2, 3, 5 and 6 charging adulteration and misbranding were dismissed.

2094.—Weideman Co., Cleveland, Ohio; misbranding of stomach bitters; adulteration and misbranding of extract of peppermint; misbranding of cordial; pleaded guilty to second and third counts of the information charging adulteration and misbranding of extract of peppermint, and entered a plea of *nolo contendere* as to the first and fourth counts charging misbranding of stomach bitters and cordial; fined $25 on the second and third counts, with costs of $25.81.

2095.—George W. Lowden Co., Savannah, Ga.; adulteration and misbranding of oysters; condemned and forfeited; but on payment of all costs, and bond of $250, product was released.

2096.—Schlesinger & Bender, Inc., San Francisco, Cal.; misbranding of wine; condemned and forfeited.

2097.—John S. Talmadge Co., Ltd., New Orleans, La.; misbranding of rice; condemned and forfeited; but on payment of all costs, and bond of $250, product was released.

2098.—Jacob Frank, Charles Frank and Emil Frank; adulteration and misbranding of white pepper; fined $50, together with costs of $101.25.

2099.—George Ziegler Co., Milwaukee, Wis.; adulteration of candy; pleaded guilty; fined $25.

2100.—George Ziegler Co., Milwaukee, Wis.; adulteration of candy; pleaded guilty; fined $25.

2101.—Geremia Brothers, Providence, R. I.; adulteration and misbranding of so-called olive oil; condemned and forfeited.

2102.—Adulteration and misbranding of so-called olive oil; condemned and forfeited.

2103.—Haynor Mfg. Co., Inc., Norfolk, Va.; adulteration and misbranding of lemon extract; pleaded guilty; fined $50.

2104.—E. R. Durkee & Co., New York, N. Y., misbranding of salad dressing and meat sauce; pleaded guilty; fined $100 on account of first shipment, and $50 on account of second shipment.

2105.—C. H. Weaver & Co., Chicago, Ill.; adulteration of evaporated eggs; pleaded guilty; fined $50 and costs.

2106.—Bennett Medicine Co., Norfolk, Va.; misbranding of Dr. Bennett's wonder oil; pleaded guilty; fined $25 and costs.

2107.—C. H. Weaver & Co., Chicago, Ill.; adulteration of evaporated eggs; pleaded guilty; fined $50, with costs.

2108.—McNeil & Higgins Co., Chicago, Ill.; adulteration and misbranding of lemon flavor; pleaded guilty; fined $25, with costs.

2109.—United States Turpentine and Linseed Oil Co., New York, N. Y.; adulteration and misbranding of turpentine; pleaded guilty; sentence suspended.

2110.—C. H. Weaver & Co., Chicago, Ill.; adulteration of evaporated eggs; pleaded guilty; fine $50, with costs.

2111.—William Twilley, St. Georges Island, Md.; adulteration of oysters; entered a plea of not guilty, defendant released on $15 collateral. Defendant failed to appear to answer to information, said collateral was forfeited.

2112.—J. E. Fowler Co., Inc., Richmond, Va.; adulteration and misbranding of extract of nutmeg; pleaded guilty; fined $25, with costs.

2113.—E. H. Hayden, Abels, Md.; adulteration of oysters; entered a plea of not guilty; defendant released on $15 collateral.

2114.—Southern Fibre Co., Portsmouth, Va.; misbranding of stock feed; entered a plea of *nolo contendere;* fined $20.

2115.—Thompson Phosphate Co., Palos Park, Ill.; adulteration of wild cherry phosphate; pleaded guilty; fined $25, with costs.

2116.—Moses R. Stern, New York, N. Y.; adulteration and misbranding of peppermint extract; pleaded guilty; fined $50.

2117.—Dr. Charles A. Pusheck, Chicago, Ill.; misbranding of Dr. Pusheck's cold push treatment No. 12; pleaded guilty; fined $50, with costs.

2118.—Mason, Au & Magenheimer Conf. Mfg. Co., Brooklyn, N. Y.; adulteration of candy bantams; pleaded guilty; fined $25.

2119.—Gypsum Canning Co., Port Clinton, Ohio; adulteration of tomato pulp; entered a plea of *nolo contendere;* fined $25, with costs.

2120.—Knightstown Conserve Co., Knightstown, Ind.; adulteration of tomato pulp; condemned and forfeited.

2121.—Pompeian Co., Washington, D. C.; misbranding of olive oil; pleaded guilty; fined $25.

2122.—Gordon Syrup Co., Berkeley, Cal.; misbranding of molasses; condemned and forfeited; but on payment of cost of proceedings, and bond of $350, product was released.

2123.—Arthur A. Stillwell & Co., New York, N. Y.; adulteration of oil of rosemary flowers; pleaded guilty; sentence suspended.

2124.—Knightstown Conserve Co., Knightstown, Ind.; adulteration of tomato pulp; condemned and forfeited.

2125.—E. B. Mueller & Co., Port Huron, Mich.; adulteration of wheat; product was released on payment of cost of proceedings, and bond of $2,000.

2126.—Arthur J. Thompson Co., Chicago, Ill.; adulteration of apple chops; pleaded guilty; fined $50, with costs.

2127.—Angelo Da Prato, Washington, D. C.; adulteration of tomato sauce; pleaded guilty; fined $10.

2128.—Steinwander, Stoffregan & Co., New York, N. Y.; adulteration and misbranding of coffee; pleaded guilty; sentence suspended.

2129.—James B. Horner, New York, N. Y.; adulteration of oil of lavender flowers; pleaded guilty; fined $25.

2130.—Warner-Jenkinson Co., St. Louis, Mo.; adulteration and misbranding of vanilla extract; entered a plea of *nolo contendere;* fined $1 and costs.

2131.—C. H. Weaver & Co., Chicago, Ill.; adulteration of dried eggs; condemned and forfeited.

2132.—Allen & Wheeler Co., Troy, Ohio; adulteration and misbranding of graham flour; pleaded guilty; fined $25, with costs of $14.75.

2133.—Arthur A. Stillwell & Co., New York, N. Y.; adulteration and misbranding of oil of lavender flowers; pleaded guilty; fined $15.

2134.—Atlantic Canning Co., Atlantic, Iowa, and Fremont, Neb.; alleged adulteration and misbranding of canned corn; condemned and sold; decree vacated on plea of Atlantic Canning Co.

2135.—John N. Hickok & Son, New York, N. Y.; adulteration and misbranding of extract of lemon peel, extract of orange, and extract of vanilla; pleaded guilty; fined $100.

2136.—Ungerer & Co., New York, N. Y.; adulteration of sassafras oil; pleaded guilty; fined $25.

2137.—M. & K. Gottstein, Seattle, Wash.; adulteration and misbranding of Blackberry cordial; pleaded guilty; fined $25, with costs of $26.42.

2138.—Mihalovitch Co., Cincinnati, Ohio; misbranding of kummel; entered a plea of *nolo contendere;* fined $50 and costs of $14.90.

2139.—S. H. Angell & Co., New York, N. Y.; adulteration and misbranding of Shaco-Kauphy; pleaded guilty; fined $75.

2140.—Tunkhannock Distilling Co., Tunkhannock, Pa.; adulteration and misbranding of witch-hazel; condemned and forfeited.

2141.—James B. Horner, New York, N. Y.; adulteration of oil of rosemary flowers; pleaded guilty; sentence suspended.

2143.—Royal Remedy & Ext. Co., Dayton, Ohio.; misbranding of lemon extract, vanilla extract, almond extract, and orange extract; pleaded guilty; fined $25, with costs of $16.85.

2144.—Gold Medal Santa Clara Prunes; adulteration; condemned and forfeited.

2145.—American Products Co., Cincinnati, Ohio; misbranding of vanilla flavor; entered a plea of *nolo contendere;* fined $25, with costs of $14.35.

2146.—American Products Co., Cincinnati, Ohio; misbranding of pistachio flavor, adulteration and misbranding of peppermint flavor, and misbranding of violet flavor; entered a plea of *nolo contendere;* fined $25, with costs of $16.85.

2147.—Meyer Bros. Drug Co., St. Louis, Mo.; adulteration of oil of cajuput; pleaded guilty; fined $25, with costs.

2148.—Schwabacher Bros., Seattle, Wash.; adulteration and misbranding of catsup; pleaded guilty; fined $25, with costs of $22.65.

2149.—M. A. Hurlburt & Co., Cleveland, Ohio; adulteration and misbranding of linseed oil; condemned and forfeited.

2150.—Atlas Preserving Co.; adulteration of prunes; condemned and forfeited.

2157.—Virginia Fruit & Produce Co., Newport News, Va.; adulteration of figs; condemned and forfeited.

2158.—Sharp-Elliott Mfg. Co., El Paso, Texas; adulteration and misbranding of apple flavored vinegar compound; pleaded guilty; fined $100.

2159.—Gengaro & Muselli, New York; adulteration and misbranding of olive oil; pleaded guilty; fined $50.

2160.—Robert Fanara, New York; adulteration and misbranding of olive oil; pleaded guilty; fined $75.

2161.—H. E. Dunaway, Rehoboth Church, Va.; adulteration of blackberries; condemned and forfeited.

2162.—Van Duzer Co., New York; misbranding of vanilla extract; condemned and forfeited; product sold by U. S. Marshall.

2163.—J. B. Malcolm & Co., Marion, N. Y.; adulteration of preserved strawberries; condemned and forfeited; but product was released to claimant on payment of costs, amounting to $68.70, and bond of $1,000.

2164.—L. Pickert Fish Co., Boston, Mass.; misbranding of herring; condemned and forfeited.

2165.—Farrell & Co., Omaha, Neb.; adulteration and misbranding of syrup; condemned and forfeited; but product was released on payment of costs and bond.

2166.—Fulton Extract & Cordial Wks., Brooklyn, N. Y.; misbranding of vodka; condemned and forfeited.

2167.—McMechen Preserving Co., Wheeling, W. Va.; adulteration of catsup; pleaded guilty; fined $10, with costs.

2168.—Ohio Hay & Grain Co., Findlay, Ohio; adulteration and misbranding of feed; condemned and forfeited; but on payment of costs, and bond of $500, product was released.

2169.—Union Mfg. & Pack. Co., Salt Lake City, Utah; adulteration and misbranding of Jamaica ginger; pleaded guilty; fined $10 and costs.

2170.—M. H. & M. S. Place, Oswego, N. Y.; adulteration and misbranding of vinegar; condemned and forfeited; but on payment of costs, and bond of $250, product was released.

2171.—City Hay & Grain Co., Norfolk, Va.; adulteration and misbranding of oats; condemned and forfeited.

2172.—E. Greenfield's Sons, New York; adulteration of candy cigars; pleaded guilty; sentence suspended.

2173.—Henry Schierer, New York; adulteration of mineral water; pleaded guilty; sentence suspended.

2174.—J. S. Farren & Co., Inc., Baltimore, Md.; misbranding and alleged adulteration of canned tomatoes; condemned and forfeited; but on payment of costs, and bond of $500, product was released.

2175.—Wabash Canning Co., Wabash, Ind.; misbranding of canned peas; on payment of costs, and bond of $500, product was released.

2176.—S. J. Van Lill Co., Baltimore, Md.; adulteration of catsup; condemned and forfeited.

2177.—United States Canning Co., Fredonia, N. Y.; misbranding of canned beans; product released to claimant on payment of costs and bond of $500.

2178.—Oceana Canning Co., Shelby, Mich.; misbranding of canned plums; on payment of costs, and bond of $1,000, product was released.

2179.—Aragon Coffee Co., Richmond, Va.; alleged misbranding of coffee; not guilty.

2180.—Potter-Sloan-O'Donohue Co., New York; misbranding of coffee compound; pleaded guilty; fined $10.

2182.—Wheeling Specialty Co., Wheeling, W. Va.; misbranding of beer; pleaded guilty; fined $15 and costs.

2183.—Wheeling Specialty Co., Wheeling, W. Va.; misbranding of beer; pleaded guilty; fined $15 and costs.

2184.—Wheeling Specialty Co., Wheeling, W. Va., misbranding of beer; pleaded guilty; fined $15 and costs.

2185.—Dawson Bros. Mfg. Co., Memphis, Tenn.; adulteration and misbranding of vinegar; condemned and forfeited.

2186.—Chas. H. Phillips Chem. Co., New York; adulteration and misbranding of Phillips' digestible cocoa; condemned and forfeited.

2187.—B. S. Ayars & Sons Co., Bridgeton, N. J.; adulteration of tomato catsup; pleaded guilty; fined $50.

2188.—Sutliff & Case Co., Peoria, Ill.; adulteration and misbranding of acetanilid tablets and nitroglycerine tablets; pleaded guilty; fined $10 and costs.

2189.—Hopper, McGaw & Co., Baltimore, Md.; adulteration of corn meal; condemned and forfeited.

2190.—Michael P. Howlett, Maurice River, N. J., adulteration of oysters; entered a plea of *non vult;* sentence suspended.

2191.—Sutliff & Case Co., Peoria, Ill.; adulteration and misbranding of Nux Vomica tablets; pleaded guilty; fined $10 and costs.

2192.—Reinhart & Newton Co., Cincinnati, Ohio; misbranding of confectionery; pleaded guilty; fined $25, with costs of $13.90.

2193.—Bluthenthal & Bickart, Inc., Baltimore, Md.; adulteration of blackberry cordial; entered a plea of *nolo contendere;* fined $20.

2194.—Ferris-Noeth-Stern Co., Inc., Baltimore, Md.; adulteration and misbranding of vanilla extract; entered a plea of *nolo contendere;* fined $5.

2195.—Ferris-Noeth-Stern Co., Inc., Baltimore, Md.; adulteration and misbranding of malt saccharine; entered a plea of *nolo contendere;* fined $20.

2196.—Atlas Preserving Co., Inc., Baltimore, Md.; adulteration of catsup; pleaded guilty; fined $40.

2197.—W. F. Assau Canning Co., Inc., Baltimore, Md.; adulteration of canned tomatoes; pleaded guilty; fined $5.

2198.—Steinwender-Stoffregen Coffee Co., St. Louis, Mo.; adulteration and misbranding of vanilla extract; on payment of all costs, and bond of $500, product was released.

2199.—Bettman-Johnson Co., Cincinnati, Ohio; misbranding of bitters; entered a plea of *nolo contendere;* fined $25, with costs of $14.30.

2200.—The American Products Co., Cincinnati, Ohio; adulteration and misbranding of orange flavor; entered a plea of *nolo contendere;* fined $25, with costs of $14.75.

2201.—Bettman-Johnson Co., Cincinnati, Ohio; adulteration and misbranding of grenadin syrup; entered a plea of *nolo contendere;* fine $25, with costs of $14.75.

2202.—Roberts Bros., Baltimore, Md.; adulteration of canned tomatoes; pleaded guilty; fined $5.

2203.—Dixie Syrup Co., Inc., Baltimore, Md.; adulteration and misbranding of syrup; pleaded guilty; fined $25.

2204.—Frank Tea & Spice Co., Cincinnati, Ohio; adulteration and misbranding of paprika; entered a plea of *nolo contendere;* fined $25, with costs of $15.85.

2205.—Farrell & Co., Omaha, Neb.; misbranding of syrup; pleaded guilty; fined $25 and costs.

2206.—J. S. Farren & Co., Baltimore, Md.; misbranding of canned garden spinach; entered a plea of *nolo contendere;* fined $20.

2207.—Lowenthal, Strauss Co., Cleveland, Ohio; misbranding of stomach bitters; condemned and forfeited.

2208.—Reinhart & Newton Co., Cincinnati, Ohio; misbranding of confectionery; pleaded guilty; fined $25, with costs of $13.75.

2209.—McManus-Heryer Brokerage Co., Kansas City, Mo.; misbranding of canned corn; on payment of costs, and bond of $500, product was released.

2210.—Great Atlantic & Pacific Tea Co., Jersey City, N. J.; adulteration and alleged misbranding of coffee; entered a plea of *non vult* as to the first count and fined $50; second and third counts were *nolle prossed.*

2211.—Reinhart & Newton Co., Cincinnati, Ohio; misbranding of confectionery; pleaded guilty; fined $25, with costs of $14.20

2212.—Augusta Canning Co., Brooklyn, N. J.; misbranding of succotash; condemned and forfeited; but on payment of costs, and bond of $300, product was released.

2213.—Sutliff & Case Co., Peoria, Ill.; misbranding of beef, wine, and cocoa; pleaded guilty; fined $10, with costs.

2214.—Cooke Shanawolf Co., Baltimore, Md.; adulteration and misbranding of tomato pulp; condemned and forfeited.

2215.—Greenwich Egg Co., New York; adulteration of Frozen eggs; condemned and forfeited.

2220.—Central City Pickle Co., Peoria, Ill.; adulteration and misbranding of vinegar; pleaded guilty; fined $10 and costs.

2221.—Bettman-Johnson Co., Cincinnati, Ohio; adulteration and misbranding of blackberry cordial; entered a plea of *nolo contendere;* fined $25, with costs of $13.45.

2222.—Bettman-Johnson Co., Cincinnati, Ohio; misbranding of bitters; entered a plea of *nolo contendere;* fined $25, with costs of $15.85.

2223.—Florent Sanfacon, Grand Isle, Me.; adulteration of raspberries; condemned and forfeited.

2224.—Crazy Wells Water Co., Mineral Wells, Texas; adulteration of mineral water; condemned and forfeited.

2225.—L. B. Katz, New York; misbranding of vodka; product sold by U. S. marshal.

2226.—L. B. Katz, New York; misbranding of vodka; product sold by U. S. marshall.

2227.—William Gerst Brewing Co., Nashville, Tenn.; adulteration and misbranding of beer; condemned and forfeited; but on payment of costs, and bond of $400, product was released.

2228.—Russian Monopole Co., New York; misbranding of vodka; condemned and forfeited.

2229.—Obermeyer & Liebmann, Brooklyn, N. Y.; adulteration and misbranding of beer; condemned and forfeited.

2230.—Russian Transfer Monopole Co., New York; misbranding of vodka; condemned and forfeited.

2231.—J. C. Hubinger Bros. Co., Keokuk, Iowa; misbranding of syrup; condemned and forfeited; but on payment of costs, and bond of $500, product was released.

2232.—Russian Monopole Co., New York; misbranding of vodka; condemned and forfeited.

2233.—Seymour Canning Co., Seymour, Ind.; adulteration of tomato pulp; condemned and forfeited.

2234.—Russian Monopole Co., New York; misbranding of vodka; condemned and forfeited.

2235.—John L. Coburg, New York; adulteration and misbranding of malt tonic; condemned and forfeited.

2236.—Central City Pickle Co., Peoria, Ill.; adulteration and misbranding of vinegar; pleaded guilty; fined $10 and costs.

2237.—E. R. Durkee & Co., New York; misbranding of vanilla extract; pleaded guilty; sentence suspended.

2238.—D. Ghirardelli Co., San Francisco, Cal.; alleged misbranding of Italian chocolates; not guilty.

2239.—Furst Bros., Cincinnati, Ohio; adulteration and misbranding of honey gin and orange; pleaded guilty; fined $25, with costs of $15.25.

2240.—Shawnee Milling Co., Topeka, Kan.; adulteration of flour; on payment of costs, amounting to $38.84, and bond of $500, product was released.

2241.—Cincinnati Ext. Wks., Cincinnati, Ohio; adulteration and misbranding of vanilla flavor (bakers), ginger extract (Jamaica), vanilla extract (special A), cassia extract, vanilla extract (Boston), lemon extract (bakers), and vanilla extract (superior ice cream); and misbranding of pistachio extract; entered a plea of *nolo contendere;* fined $251, with costs of $23.75.

2242.—Cincinnati Ext. Wks., Cincinnati, Ohio; adulteration and misbranding of wintergreen extract; entered a plea of *nolo contendere;* fined $25, with costs of $14.55.

2243.—Cincinnati Ext. Wks., Cincinnati, Ohio, adulteration and misbranding of blood orange extract and of orange extracts; entered a plea of *nolo contendere;* fined $25, with costs of $16.35.

2244.—Cincinnati Ext. Wks., Cincinnati, Ohio; adulteration and misbranding of nutmeg extract; entered a plea of *nolo contendere;* fined $25, with costs of $13.45.

2245.—Aaron Berkman, Washington, D. C.; adulteration of tomatoes; pleaded guilty; fined $10.

2246.—George D. Asquith, Washington, D. C.; misbranding of so-called Red Dragon seltzer; pleaded guilty; fined $10.

2247.—Nicholas T. Redman, Washington, D. C.; adulteration and misbranding of eggs; pleaded guilty; fined $10.

2248.—Western Buyers Assn., Kansas City., Mo.; adulteration and misbranding of lemon extract; pleaded guilty; fined $25, with costs.

2249.—John Bryant, Washington, D. C.; adulteration of oysters; pleaded guilty; fined $5.

2250.—F. W. Hinz & Son, Cincinnati, Ohio; misbranding of coffee; pleaded guilty; fined $25, with costs of $14.35.

2251.—Cohn-Hume Fisheries Co., San Diego, Cal.; adulteration and misbranding of sardines; condemned and forfeited; but on payment of costs, and bond of $350, product was released.

2252.—S. Shulman, Brooklyn, N. Y.; misbranding of vodka; condemned and forfeited; but on payment of costs, and bond of $500, product was released.

2253.—Old Spring Distilling Co., Cincinnati, Ohio; adulteration and misbranding of so-called apple brandy; pleaded guilty; fined $25, with costs of $14.35.

Insecticide Judgment Notices.

We have just received the following Notices of Judgmen under the Insecticide Act: Nos. 18, 19, 21, 22, 23, 24, 25.

Imports of Olive Oil Not Adulterated.

Following the receipt of several inquiries as to whether a large part of the olive oil imported into the United States is adulterated with cottonseed oil, the Department of Agriculture has made a special investigation. Since 1900 the Department, through its various port laboratories, has examined samples from 2,149 importations of olive oil. Of these, only ten were refused entry, and only three of these were refused entry for containing cottonseed oil. These cottonseed oil adulterations date back to 1908, when two shipments were found to be adulterated, and 1909, when one shipment was found to be adulterated. Since that time there has been no shipment which has given evidence of cottonseed oil adulteration.

Shrinkage No Defense in Syrup Case.

In a notice just issued in a syrup case by the Department of Agriculture, recording a judgment, in which $50 fine was imposed, the Federal judge charged and the jury decided that certain syrup cans of quart size marked "full measure" were misbranded because they contained only 93.8 per cent. of a quart. The judge charged explicitly that the defense of shrinkage was not to be entertained.

STATE.

Florida.

We have received from W. A. McRae, Commissioner of Agriculture of Florida and R. E. Rose, State Chemist, copies of the new Immature Citrus Fruit Law of Florida and regulations for enforcing the same.

Missouri.

Frederick H. Fricke, who was recently appointed State Food and Drug Commissioner of Missouri, is head of Fricke-Hahn Drug Company, which owned and operated over twenty drug stores in the city of St. Louis. In his twenty-five years' experience he mastered every detail of his profession and is regarded as one of the most expert druggists in St. Louis. He is a member of the American Pharmaceutical Association, Missouri Pharmaceutical Association, and the Retail Druggists' Association, and has been active in all of these bodies. He said recently: "I expect to have some recommendations to make to the next legislature, but in the meantime will endeavor to give an administration of the affairs of the office which I hope will be satisfactory to the citizens of this state without reference to party affiliations."

New York.

The Justices of Special Sessions in New York City have decided that even though the United States Commission appointed to investigate the use of saccharin had disagreed, the fact that the Board of Health of this city passed an ordinance forbidding its use was sufficient to constitute a crime should one use it. In the circular which was sent out recently the Health Commission quotes from the court decision and says: "The department again reminds manufacturers of foods (including beverages) that the use of saccharin in foods is prohibited, that all violations found by the department will be prosecuted, and that all such adulterated foods will be seized and destroyed."

More than twelve manufacturers of food supplies have been convicted under the decision of the Justices of Special Sessions.

North Dakota.

Commissioner Ladd's special bulletin No. 17 contains evidence of a large amount of work. Of interest to our readers is the following:

9,791.—Half Strength Terpenless Lemon Extract. Griggs Cooper & Co., St. Paul, Minn. Illegal under the N. D. Food Law.

TRADE NOTES

Mr. James M. Bush, managing director of W. J. Bush & Co., Ltd., London, arrived here on the *Mauretania*, July 22, and sailed for home on the *Imperator*, on August 9.

Mr. W. A. Bush, a young scion of the family that established the firm, and who is connected with the American branch, arrived in New York on July 18, on a steamship from New Orleans, after a two months' business trip.

Mr. Charles Zeller, late chemist and perfumer for Carmichael & Co., Detroit, Mich., has joined the sales force of W. J. Bush & Co., Inc., New York, and will travel in the Middle West.

Mr. B. L. Warner, formerly vice-president of Warner-Jenkinson Co., St. Louis, Mo., manufacturers of flavoring extracts, also has accepted a position as salesman for this firm, and will cover the eastern states.

Mr. A. E. A. Bettesworth, treasurer of W. J. Bush & Co., (Canada) Ltd., Montreal, was a recent visitor to this city.

Mrs. Clara Tetlow, who succeeded her husband, the late Daniel Tetlow, to the ownership and management of the Tetlow Mfg. Co., 59 North Mascher street, Philadelphia, was a recent visitor to New York, and spent a few days at a neighboring seashore.

Dr. Edgar G. Thomssen, formerly chemist for the Lightfoot Schultz Co., and still secretary and consulting chemist, has accepted an appointment as chemist of the Bureau of Animal Industry, Department of Agriculture, at Washington, D. C. His special field of work will be in the creamery department.

Mrs. Ida Tetlow, widow of the late Joseph Tetlow, of Philadelphia, sailed on the *Mauretania*, July 23, for a short European vacation.

Mr. Ferdinand Weber, vice-president of George Lueders & Co., of this city, has gone to Europe to attend the golden anniversary of the marriage of his parents, which is to be celebrated in September at Hamburg, Germany. He sailed on board of the *Imperator* on August 9, his family having sailed in July on the same steamship.

Philadelphia Drug Club has elected the following new members: William E. Swindell, representing Swindell Brothers, of Baltimore; H. D. Goring and F. Newton Carpenter, representing Lazell, Perfumer, New York.

Mr. Ben Elson, of Elson & Brewer, Inc., New York, is making a flying business trip through the Middle West. He expects to sail for France next month.

Mr. Willard B. Daniels, importer and exporter of talc, clays and minerals, 252 Front street, New York, has produced a novelty in the form of a business card which contains a color barometer. A ship is shown in a colored panel, representing the playground of a storm, and the indications for the weather are provided: Blue, fair; pink, rain; lilac, change. It certainly is a very clever business card.

Orford Soap Co., Norwich, Conn., has recently built an addition to its plant in Hilliard street.

Mr. and Mrs. Arthur G. Cailler arrived home on the *Nieuw Amsterdam*, August 18.

Mr. Hugo Cailler will sail on the *Minnewaska*, August 23, for a short European vacation. The Messrs. Cailler are of the firm of Cailler & Co., New York, importers of essential oils.

Mr. R. W. Whitlatch, of the Whitlatch Company, Bombay, India, arrived in New York last month on a business visit to last till October. His firm represents a number of European and American manufacturers, in all lines, including perfumery and toilet preparations. Mr. Whitlatch was engaged in the perfumery business in this country as a manufacturer a few years ago.

While walking through Fulton street, New York, on a recent afternoon, the Editor saw the two gentlemen whose photographs adorn this page. They are Wm. H. Green, of the Metal Package Co., Brooklyn, N. Y., and W. E. Swindell, of Swindell Bros., Baltimore, Md. These gentlemen have won their way into the hearts of the trade through their engaging personality, and straightforward character, and there is therefore no cause to wonder at the progress they have made. Mr. Swindell is a member of his firm and is in charge of the New York office.

Mr. Edwin H. Burr, manager of the American Branch of Roure-Bertrand Fils, Grasse, France, is enjoying a few weeks' vacation with his family at Buck Hill Falls, Pa. Their year-round home is at Red Bank, N. J.

Mr. Edwin H. Ross, former sales manager of the corporation of Richard Hudnut, resigned his position on August 1. He has not yet announced his plans. He is succeeded by Mr. L. P. Lamoureux, who has been with Richard Hudnut for several years, and was formerly European sales manager and later American sales manager for Armour & Co., Chicago, Ill., in the soap manufacturing department.

We are in receipt of a postal from Mr. Edgar A. Weber, of Chicago, sent from his home on Frankfort-on-Main, where he joined his wife and children, who have been abroad for the past month or so.

Mr. F. H. Ungerer, of Ungerer & Co., New York, has just returned to his desk after a three weeks' vacation with his family at Wentworth, N. H.

Mr. George H. Neidlinger, general manager of the Peerless Tube Co., 79 Murray street, New York, is on an automobile tour with Mrs. Neidlinger.

Mr. Frank Monroe Noonan, of T. Noonan, Sons & Co., Boston, Mass., manufacturers of perfumes and toilet preparations, was a recent visitor to this city.

At a meeting of Lever Bros., Ltd., in July, a resolution was carried that the nominal capital be increased from £20,000,000 to £30,000,000. The new capital will take the form of 3,000,000 additional 15 per cent. cumulative preferred ordinary shares of £1 each, 5,000,000 20 per cent. cumulative preferred ordinary shares of £1 each, and 200,000 additional ordinary shares of £10 each. The new shares are to be offered at par, in the first instance, to the existing holders of ordinary shares and to be issued at such times as the directors think fit.

National Association of Retail Druggists is meeting this month at Cincinnati, Ohio, and the American Pharmaceutical Association is in session at Nashville, Tenn. The National Wholesale Druggists' Association will meet in Jacksonville, Fla., November 17-21.

PAINT AND PERFUMERY.—A poetical old shopkeeper was having his shop repainted one spring. He told the painter to leave a certain corner untouched for the time being; he explained that the young people at that season did all their courting there, and he didn't want them to get smudged. "But," objected the painter, "these young folks would be fools not to know the smell of fresh paint." "Young fellow," said the old shopkeeper, "you've never had a girl, that's plain. If you had, you'd know that when folks are in love everything—wet paint included—smells like violets and roses."—*Oil and Color Trades Journal.*

Mr. Thomas E. Lannen, counsel for the Flavoring Extract Manufacturers' Association of the United States, read an able and convincing address on "Our Right to be Heard," before the National Confectioners' Association at its recent convention in Cleveland, Ohio. Mr. Lannen marshalled his ideas in a way that showed his thorough intimacy with the subject of food law legislation and attempts to harass the trade.

Phoenix, Ariz., reports a new industry in the Tip-Top Soap Company, located temporarily at 1506 West Fillmore street, in that city. It already is manufacturing soap on a small scale. S. S. Green, one of the organizers, claims to have discovered a mineral deposit which can be utilized in making soap and which will impart a medicinal value to the product. The company has these officers: Dr. E. Munson, president; H. T. Bayless, of Oklahoma, vice-president; G. E. Rodgers, secretary; S. S. Green, treasurer, and W. S. Lawson, of Phoenix, member of the board of directors.

Two arrests have since been made by the New York police in the case of the robbery of the depot in this city of the Rigaud-Vial Company, of Paris, which was reported in our July issue. Charged with receiving part of a lot of 111 dozen two-ounce vials and six one-pound bottles of high-grade perfumery, Louis Friedman, a druggist, of 71 Chrystie street, and William Siegel, of 324 Broome street, were arraigned in the Essex Market Court and held in default of $1,000 bail each for a hearing in the Tombs Police Court. The detectives detailed on the case reported that they had observed Friedman and Siegel in conversation and that, after a conference they had walked off together and Siegel had returned with a suit case and a sample case containing a gross of the purloined goods. Friedman, according to the detectives, admitted that he had bought the goods from Siegel, but said that he had made the purchase in good faith. Siegel refused to talk about the charge either with the police or with the magistrate before whom he was arraigned.

Mr. Donald McKesson, of McKesson & Robbins, New York, whose marriage was announced in our July issue, after a honeymoon trip in Europe expected to sail from Liverpool for New York of August 14. The itinerary included France, Norway, Sweden, Holland and the British Isles.

Mr. Herbert D. Robbins, of McKesson & Robbins, returned to his desk on July 31 after an absence from business of almost a year, due to ill health, which has been restored. Mr. Robbins went abroad in September, 1912, and received medical and surgical treatment by European specialists, after which he spent some time in Egypt for rest and recuperation.

William F. Kimmich, manager of the export department of McKesson & Robbins, has returned from a vacation which he spent in the Adirondacks.

Mr. Alfred D. Smack, for many years connected with Thurston & Braidich, of this city, sailed for a six weeks' trip to Europe on the *Niagara* on July 19. During his sojourn abroad he will visit England, Holland, Germany and Switzerland.

Putzel-Rich Co., Inc., 43-45 West Thirty-fourth street, New York, has been incorporated by Mr. Sidney Rich, former Vice-Consul at Chemnitz, Germany, and Mr. G. Putzel, a gentleman of many years' experience in the importing line. This company represents George Adler, Buchholz, Germany, a large manufacturer of paper boxes for manufacturers of perfumery and toilet preparations, and has also an excellent line of lithographed tin boxes.

In a recent interview Mr. Edward Schott, president of the Long Island Drug Club, who is chairman of the Exhibition Committee of the Drug Trade Exhibition and Conference, to be held in New York in October, made the following statement:

"This whole proposition is one of concentration and co-operation, getting together and keeping together is the keynote of success. Our idea has been prompted by the successful results of exhibitions, as shown in the conduct of the automobile, motor boat, cement, rubber and furniture industries. In the latter case, in one period of eighteen days, the New York Furniture Exchange was visited by two thousand buyers, representing an aggregate of $100,000,000 interested in the retailing of furniture. All of this in spite of the Great Western markets for that industry.

"It was the knowledge of these facts which led the Long Island Drug Club to organize the Drug Trade Exhibition and Conference, and there is no reason why the hundreds of manufacturers in the drug trade should not get together in the same spirit of co-operation as has been done in these other trades.

"That the proposition is sound, has already been demonstrated, by the fact that during the short time that the matter has been before the trade upwards of 5,500 square

feet of space has been reserved. The list of exhibitors at the present time includes: Cleaning fluid, drug specialties, spring waters, cough remedies, hair tonic, grape juice, corks and seals, malt extracts, tooth paste, tonics, confectionery, gum manufacturers, facial creams, toilet preparations, and miscellaneous manufacturers.

The business of the late James Good, for many years engaged in the manufacture of soaps, disinfectants and insecticides in Philadelphia, was sold at auction on July 15. It was purchased by one of the heirs, Miss Roberta Good, who, it is reported, will continue to conduct the business, which was established in 1868.

Mr. Joseph Abrahams, superintendent of soap manufacture for Frederick Stearns & Co., Detroit, was in New York last month buying new machinery. The soap plant of Frederick Stearns & Co. is being considerably enlarged to take care of the rapid strides of this department.

Foreign Trade Opportunities are frequently offered through the Bureau of Domestic and Foreign Commerce, Washington, D. C., to which inquiries and correspondence should be addressed, mentioning the number of each. No. 11,289 relates to soap. An American consul in a European country reports that the leading firm of grocers in a large city desires to get in touch with American manufacturers of toilet and laundry soap. Quotations should be furnished f. o. b. New York or c. i. f. a certain European port.

No. 11,390. Soaps and Toilet Requisites.—An American consul has forwarded the application of a business man for agency to represent in India, Ceylon, Burma, and Straits Settlements, American soap, toilet requisites, metal and shoe polish, and sundry lines on a salary, commission, and expenses basis, or on commission and expenses basis alone. The inquirer has had extensive experience in traveling for a soap concern, and in the opinion of the consul would make an excellent representative for some American house if satisfactory arrangements could be made.

No. 11,404. Soaps for Wool Washing and Cloth Scouring.—A report from an American consular officer states that a trade organization in his district requests manufacturers of pure fat and cottonseed oil soaps to forward lowest prices, in English money, per ton of 2,240 pounds; terms of payment for delivery c. i. f. Leeds or Bradford; large samples of various qualities for trial; complete analyses specifying exact percentages of ingredients, especially proportions of fatty acid; guaranty that all shipments shall be equal to samples and analyses; guaranty that all shipments shall be securely packed; smallest and largest quantities prepared to ship; if agreeable, to appoint the association sole importers for Great Britain. The soaps should be packed in 2-hundredweight boxes and cut in 3-pound bars. It would facilitate transactions if the foregoing guaranties and analyses could be attested by a British consul.

Professor—"What's this?" Barber—"Your check, sir—hair cut, shampoo, shave and massage." Professor—"Did I get all that?" Barber—"Surely, sir." Professor—"It's queer—very queer." Barber—"What's queer?" Professor—"Why, the working of the human mind. What I came in here for was to get my razor set."—*Hairdressers' Weekly Journal.*

Publications, Price Lists, Etc., Received.

TRADE NAMES, Supplement No. 2, 1913, published July 1, 1913, by the Manufacturing Perfumers' Association.—This supplement contains some of the trade marks registered in the United States Patent Office during the second quarter of this year, and about a dozen new names filed informally with the association. In the latter class we find that famous phrase, "Slice of Happiness," filed by its originator.

SCIENTIFIC BOOKS.—Monthly Record of Scientific Literture, for May and June, is at hand from the D. Van Nostrand Company, 25 Park place, New York.

BIBLIOGRAPHICAL CONTRIBUTIONS, Lloyd Library, Cincinnati, Ohio.—No. 11, for July, 1913, has just been issued. It covers bibliography relating to the flora of various countries of Asia and Japan and is arranged in the customary comprehensive manner.

E. SACHSSE & Co., Leipzig, Germany; Pfaltz & Bauer, American agents, 300 Pearl street, New York, send us a new price list of essential oils, including their complete line of terpene and sesquiterpene free essential oils, synthetic perfumes, flower oils, fruit extracts, ethers, flavoring essences, soap colors and other products which they manufacture.

STAFFORD ALLEN & SONS, Ltd., London, Eng.; Ungerer & Co., American agents, 273 Pearl street, New York.—Notes on pure English almond oil and apricot kernel oil, which is a cheaper substitute for the former.

ALEXANDER & MENDES, INC., 131 West 24th street, New York.—Export price list of toilet preparations, liquid soaps, etc.

VANDERBILT UNIVERSITY, Nashville, Tenn.—Bulletin of the Department of Pharmacy, 1913-14.

ARABOL MANUFACTURING CO., 100 William street, New York.—Announcement of merits of tinnol as an adhesive for pasting labels.

PROCEEDINGS of the nineteenth annual meeting of the Manufacturing Perfumers' Association of the United States, held in New York, April, 1913. This is a well-printed and neatly-bound book of 172 pages, and serves to preserve the proceedings in substantial and handy form. The same matter was published in our issue of May, 1913, with the exception of the list of members of the association, and the constitution and by-laws. The editing of this report was done by Mr. A. D. Henderson, secretary of the association, who has performed his task well.

THE HISTORY OF "ALLEN'S ENGLISH," Eighty Years of Progress, published by Stafford Allen & Sons, Ltd. This is a handsomely printed brochure of 8 pages and cover, giving the history of the various members of the firm from the earliest times to the present, and engravings of these gentlemen.

Other illustrations show views in the works at Cowper street, London; a factory in the fields at Long Melford, works at Long Melford, and views of the fields showing various crops in bloom. There is also an engraving showing a group of the firm's chemical staff and department heads.

All in all this brochure is very carefully prepared, and is a very interesting description of an important firm and its works, and has the further merit of being very well printed indeed.

IN MEMORIAM FOR DEPARTED FRIENDS.

HERMAN T. FRITZSCHE, of Fritzsche Bros., August, 1906.

WILLIAM PHILLIP UNGERER, Ungerer & Co., August, 1907.

AARON W. C. WILLIAMS, Williams Soap Co., August, 1910.

HUBERT SCHLIENGER, Bertrand Freres, August, 1910.

WILLIAM B. ROBESON, New York, agent for Antoine Chiris, Grasse, France, August, 1908.

JOHN B. LADD, of Ladd & Coffin, New York, August, 1910.

JOSEPH TETLOW, perfumery, Philadelphia, August, 1911.

NICHOLAS SHELDON, soaps, Rhode Island, August, 1911.

EMIL AARON, soaps, retired, New York, August, 1912.

ALBERT HOLMES TATUM, of the Whitall-Tatum Co., perfumers' glassware, New York, August, 1912.

DR. H. S. KELLEY, soaps and toilet specialties, West Dennis, Mass., August, 1912.

REGINALD HOWELL, of Stevenson & Howell, Ltd., essential oils, London, Eng., August, 1912.

CHARLES H. DE DORMAN, perfumer, Willis H. Lowe Co., Boston, Mass., August, 1912.

JOSEPH LEVISON, with American Stopper Co., Brooklyn, N. Y., August, 1912.

Obituary Note.

Mrs. Wallace C. Dunn, of this city, died suddenly on July 18 after a brief illness at her home, 373 Lafayette avenue, Passaic, N. J., August, 1912. She is survived by her husband, senior member of the talc importing firm of Dunn & Kruse, New York.

NEW INCORPORATIONS.

Warshaw Bros., Perfumers, Inc., Manhattan Borough, New York City, has been incorporated to manufacture toilet articles, with $30,000 capital, by E. Warshaw, S. Warshaw and P. Warshaw, of Brooklyn, N. Y.

Foster Chemical Co. has been incorporated under the laws of Delaware, with a capital of $100,000, by F. H. Coffin of Scranton, Pa.; G. B. Linnard of Philadelphia, and F. C. Dallin of New York City.

Crescent City Alcohol Co., New Orleans, La., has been incorporated with $200,000 capitalization, by Lorenzo Federico, Alfonso De Fictailis and Marco Antonio Pizatti.

Vanitass Manufacturing Corporation of Manhattan, New York City, to manufacture soaps, cosmetics, etc., with $25,000 capital stock, has been incorporated by Alfred Houston, Theron A. Clements and James Spiller, all of 115 Broadway, New York.

Clean-All Chemical Co., Cleveland, Ohio, to manufacture soaps, polishes, powders, chemicals, etc., with $10,000 capital has been incorporated by S. Q. Kerruish, G. V. Owen, Clarence H. Haffner, G. E. Hartshorn and I. M. Harrivel.

Universal Sanitary Sales Co., Portland, Maine, deal in sanitary fixtures and devices, $200,000 capital stock, has been incorporated by A. F. Jones, president, and T. L. Croteau, treasurer, both of Portland, Maine.

Modern Chemical Co. of Manhattan, Inc., New York City, to make human hair dyes, $10,000 capital, has been incorporated by Mortimer Cohen, Bernard M. Breslauer and George R. Downs, 120 West 95th street, New York City.

Caroline Chemical Co., Boston, Mass., to manufacture toilet powders, etc., with a $50,000 capital stock, has been incorporated by E. A. Gordon and H. Fonseca, of Boston.

Smith & Nichols, Inc., Manhattan Borough, New York, manufacturers of candles, waxes and greases, have been incorporated with a capital stock of $150,000, by H. Smith of Orange, N. J.; G. O. Elmore, of East Orange, N. J., and A. B. Bisland, of New York City.

Crowning Glory Mfg. Co., Wilmington, Del., to deal in soaps, cosmetics and hair tonics, has been incorporated with a capitalization of $500,000.

Cocolco Co., Inc., Manhattan Borough, New York City, toilet articles, $50,000 capital stock, has been incorporated by Cousen A. Holgerson, Edward H. Jewell and Hamilton Young, 3136 Broadway, New York City.

EFFECT OF THE FEDERAL FOOD AND DRUGS ACT ON THE WHOLESALE DRUG BUSINESS.

BY JOHN THOMPSON, PITTSBURGH, PA.

The oil market is the most affected, the improvement in quality being very great. Oil of bitter almonds is 50 per cent. better, according to the price lists; oil of anise 25 per cent.; cassia 50 per cent.; cubeb about 300 per cent.; erigeron 200 per cent.; fennel 25 per cent.; lavender flowers 80 per cent.; orange, both sweet and bitter, 25 per cent.; pennyroyal 90 per cent.; pimento 25 per cent.; rose geranium 100 per cent., and savin 100 per cent.

On the other hand, oil of tansy has declined, but it is the only example I could find of a decided decline in price. Cod liver oil has declined greatly since 1905, but this is one of the drugs which, I believe, has never been much adulterated, the decline being due to lessened demand and greater production.

The law has affected sweet oil in the ruling that none but olive oil can be so labeled. This caused the wholesalers a lot of trouble when the druggist ordered "cheap sweet oil for external use" and got "cotton seed oil." He often raised a howl, with seeming cause.—*Journal American Pharmaceutical Association.*

Extracting Oils From Wood.

5,978.—EXTRACTING OILS.—C. P. Ogilvie, Lawford Place, Manningtree, Essex, and G. Mitchell, 39 Victoria Street, London. Filed March 12, 1910.

The heavy oils and resins are extracted from wood by means of a solvent consisting of the lighter oils contained therein and initially obtained therefrom by blowing steam through the wood in a disintegrated condition. The solvent, after passage through the vessels containing the wood to be treated, is blown with steam, which carries with it the lighter oils, the heavy constituents remaining behind. The lighter oils can be again used for extracting the heavy products.

Cannot Get Along Without It.

Editor American Perfumer and Essential Oil Review:

Please renew my subscription for another year to your journal. I would not be without the AMERICAN PERFUMER, for it is up-to-date, spicy and full of "just the information we are looking for." It is a ready reference and really deserves a most prosperous future.

FREDERICK A. HASSE, JR., PH. G.

Zenith Laboratories, New York, August 6, 1913.

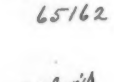
PATENTS AND TRADE MARKS.

44396

44396

46168

ORIANA
65162



69545

Nivea
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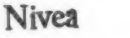


SOAPSTONE
69854

PAY DAY
70136

TILIKUM
70505

70707

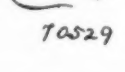
64617

67937

69745

KEWPIE
70228

ASTOL
70852



Val-O
70529

65039

69016

69786

KEWPIE
70229

PORINE
70595

ROXOLANA
65107

66072

COLONIAL
69406

70709

DENSERVO
70328

DENTASCO
70702

NOTE TO READERS.

This department is conducted under the general supervision of a very competent patent and trade mark attorney. This report of patents, trade marks, labels and designs is compiled from the official records of the Patent Office in Washington, D. C. We include everything relating to the four co-ordinate branches of the essential oil industry, viz.: Perfumes, Soap, Flavoring Extracts and Toilet Preparations.

The trade marks shown above are described under the heading "Trade Marks Applied For," and are those for which registration has been *allowed*, but not yet *issued*.

All inquiries relating to patents, trade marks, labels, copyrights, etc., should be addressed to

PATENT AND TRADE MARK DEPT.
Perfumer Pub. Co. 80 Maiden Lane, New York.

DESIGNS ISSUED.

44,396.—Cake of Soap.—George C. Beckwith, Minneapolis, Minn. Filed March 1, 1913. Serial No. 751,652. Term of patent, 14 years.

The ornamental design for a clock, as shown.

LABELS REGISTERED.

17,146.—Title: "Travella." (For Cold-Cream.) — J. Bailey Johnson, Edgewood, Pa. Filed June 23, 1913.

TRADE MARKS REGISTERED.

92,565.—Perfume and Toilet Water.—Lazell, Perfumer, New York, N. Y.

Filed March 13, 1913. Serial No. 69,004. Published May 13, 1913.

92,573.—Perfume, Toilet Water, Sachet and Complexion Powder.—Solon Palmer, New York, N. Y.

Filed February 5, 1913. Serial No. 68,330. Published May 6, 1913.

92,599.—Hair-Tonic.—Christine Thacker, Seattle, Wash.

Filed February 3, 1913. Serial No. 68,298. Published May 13, 1913.

92,601.—Certain Named Toilet Preparations.—V Co., Wheeling, W. Va.

Filed February 26, 1913. Serial No. 68,756. Published May 13, 1913.

92,618.—Perfumed or Scented Hair-Oil—The Anglo-Indian Drug & Chemical Co., Bombay, India.

Filed March 11, 1912. Serial No. 62,096. Published May 20, 1913.

92,619.—Certain Chemicals, Medicines, and Pharmaceutical Preparations.—J. C. Ayer Company, Lowell, Mass.

Filed July 16, 1912. Serial No. 64,751. Published May 20, 1913.

92,634.—Soap.—John Callahan, Seattle, Wash.

Filed September 28, 1912. Serial No. 66,029. Published May 13, 1913.

92,638.—Hair-Tonic.—C. M. C. Co., Joplin, Mo.

Filed March 10, 1913. Serial No. 68,939. Published May 20, 1913.

92,649.—Face Powder, Face Lotions and Face Creams.—Fort Dearborn Co., Chicago, Ill.

Filed December 26, 1912. Serial No. 67,600. Published May 20, 1913.

92,655.—Mange Shampoo Preparation.—Victor G. Dupont, San Francisco, Cal.

Filed December 9, 1912. Serial No. 67,319. Published May 20, 1913.

92,659.—Soluble Chemical Compound for use as a Detergent.—The Electric Smelting and Aluminum Company, Lockport, N. Y.

Filed April 1, 1909 Serial No. 41,534. Published July 25, 1911.

92,691.—Shampoo Preparation.—William Lichtermann, San Francisco, Cal.
Filed January 28, 1913. Serial No. 68,165. Published May 20, 1913.

92,709.—Certain Named Foods.—O. R. Pieper, Milwaukee, Wis.
Filed January 31, 1913. Serial No. 68,248. Published May 20, 1913.

92,740.—Certain Chemicals, Medicines, and Pharmaceutical Preparations.—Henry Thayer & Co., Cambridgeport, Mass.
Filed July 14, 1911. Serial No. 57,623. Published May 20, 1913.

92,729.—Certain Chemicals, Medicines, and Pharmaceutical Preparations.—The Sheppard Drug Co., Charlotte, N. C.
Filed September 19, 1912. Serial No. 65,870. Published March 25, 1913.

92,797.—Soap Solution of Cresol Used for Antiseptic and Disinfecting Purposes.—The Hoffman-La Roche Chemical Works, New York, N. Y.
Filed March 21, 1913. Serial No. 69,230. Published May 27, 1913.

92,817.—Certain Named Foods.—Adolph L. Mock, New York, N. Y.
Filed November 21, 1911. Serial No. 59,834. Published May 6, 1913.

92,835.—Talcum Powder.—Thomas M. Sayman, St. Louis, Mo.
Filed April 12, 1913. Serial No. 69,747. Published May 27, 1913.

92,850.—Olive Oil.—The Waldorf-Astoria Importation Co., New York, N. Y.
Filed November 18, 1912. Serial No. 66,969. Published May 27, 1913.

92,855.—Certain Named Foods.—Western Grocer Co., Marshalltown, Ia.
Filed December 7, 1910. Serial No. 53,169. Published October 17, 1911.

92,890.—Washing Paste.—George Gray, Sisseton, S. D.
Filed April 2, 1913. Serial No. 69,530. Published June 3, 1913.

92,916.—Liquids for Cleaning and Polishing Metallic Articles.—Charles B. Spies, New York, N. Y.
Filed February 17, 1913. Serial No. 68,582. Published May 27, 1913.

TRADE MARKS APPLIED FOR.

46,168.—Lautz Bros. & Co., Buffalo, N. Y. (Filed November 29, 1909. Under ten-year proviso. Published July 22, 1913. Claims use since March, 1883.)—Soap.

64,617.—The Fountain Chemical Co., Baltimore, Md. (Filed July 8, 1912. No claim is made to the words "Facial Water" appearing upon the drawing. Published August 5, 1913. Claims use since April 29, 1912.)—A liquid toilet preparation to improve and preserve the complexion.

65,039.—The Reynolds Corporation, Bristol, Tenn. (Filed August 1, 1912. Published July 29, 1913. Claim use since July 19, 1912.)—Scouring, cleansing and polishing compound.

65,107.—Wladyslaw Jordan, Chicago, Ill. (Filed August 5, 1912. Published August 5, 1913. Claims use since October 1, 1911.)—Face cream, etc.

65,162.—Lord & Russell Mfg. Co., Richmond, Va. (Filed August 8, 1913. Published July 22, 1913. Claims use since July 1, 1912.)—Talcum powder.

66,072.—P. Sasso e Figli, Oneglia, Italy. (Filed October 1, 1912. Published August 5, 1913. Claims use since 1904. No exclusive claim being made, however, to the words "Olio Sasso L'unico Perferfetto Garantito di Pura Oliva P. Sasso e Figli Oneglia," and no exclusive claim being made to the words "P. Sasso e Figli Oneglia," which appear upon the band forming part of the picture).—Olive oil.

67,937.—The Rosenet Co., Spokane, Wash. (Filed January 15, 1913. Published July 15, 1913. Claims use since July 1, 1912.)—A hair tonic.

69,016.—John Vitucci, Seattle, Wash. (Filed March 13, 1913. Published July 15, 1913. Claims use since February 1, 1913.)—Olive oil.

69,150.—P. Beiersdorf & Co., Hamburg, Germany. (Filed March 18, 1913. Published August 5, 1913. Claims use since June 23, 1905.)—Cosmetic powder, cosmetic pastes, and preparation for the hair.

69,406.—Berry Brothers, Detroit, Mich. (Filed March 29, 1913. Published August 5, 1913. Claims use since January 2, 1901.)—Wood alcohol.

69,545.—Austro-Hungarian Art Co., Inc., New York, N. Y. (Filed April 3, 1913. Published July 29, 1913. Claims use since February 17, 1913.)—Perfumes, toilet waters, and face powders.

69,745.—Thomas M. Sayman, St. Louis, Mo. (Filed April 12, 1913. Published July 15, 1913. Claims use since March 1, 1913. The words "Dr. T. M. Sayman, St. Louis, Mo., U. S. A." are hereby disclaimed, the same constituting no part of the trademark.)—Complexion powder.

69,786.—Franz Schwerz, Charlottenburg, Germany. (Filed April 14, 1913. Published August 5, 1913. Claims use since July 1, 1912.)—An antiseptic composed of borax, sodium bicarbonate, ammoniac soda, and essential oil.

69,854.—John Heinzkill, Appleton, Wis. (Filed April 17, 1913. Published July 15, 1913. Claims use since the year 1903.)—Caustic soda.

70,136.—Klauber Wangenheim Co., San Diego, Cal. (Filed April 30, 1913. Published July 29, 1913. Claims use since November 10, 1912.)—Flavoring extracts for foods, etc.

70,228.—The Arthur Chemical Co., New Haven, Conn. (Filed May 5, 1913. Published July 29, 1913. Claims use since April 21, 1913.)—Toilet soap.

70,229.—The Arthur Chemical Co., New Haven, Conn. (Filed May 5, 1913. Published July 15, 1913. Claims use since April 21, 1913.)—Toilet powder.

70,328.—Charles W. Westenfelter, Springfield, Ohio. (Filed May 9, 1913. Published July 29, 1913. Claims use since April 19, 1913.)—Dentifrices.

70,331.—Allan Chemical Co., Louisville, Ky. (Filed May 10, 1913. Published July 29, 1913. Claims use since April 2, 1913.)—Tooth powder, talcum powder, toilet water, and tooth paste.

70,505.—Fischer Brothers, Seattle, Wash. (Filed May 20, 1913. Published August 5, 1913. Claims use since December 7, 1912.)—Flavoring extracts for foods, etc.

70,529.—Val H. Chronister, Decatur, Ill. (Filed May 21, 1913. Published July 15, 1913. Claims use since October 1, 1912.)—Perfumes and cold creams.

70,595.—Hulda Thomas, New York, N. Y. (Filed May 23, 1913. Published July 22, 1913. Claims use since September 1, 1912.)—A face cream to be applied for the purpose of reducing enlarged pores and of cleaning the pores.

70,702.—John A. Selby, Camden, N. J. (Filed May 27, 1913. Published July 22, 1913. Claims use since March 28, 1913.)—A wash for the mouth and teeth.

70,707.—Barclay & Barclay, New York, N. Y. (Filed May 28, 1913. Under ten-year proviso. Published July 22, 1913. Claims use since as early as the year 1872.)—Dentifrice.

70,709.—Barclay & Barclay, New York, N. Y. (Filed May 28, 1913. Under ten-year proviso. Published August 5, 1913. Claims use since 1868.)—Preparations for improving and dyeing hair, dentifrice, facial cream, toilet waters.

70,852.—R. G. Edwards, London, England. (Filed June 4, 1913. Published August 5, 1913. Claims use since October 28, 1911. The word "Astol.")—A preparation for restoring the natural color to the hair.

Essential Oil Reappraisement.

22,769.—Essential Oil.—From Holzmuller & Schmidt, Paris. McClelland, G. A.—Bourbon geranium oil, Ravine Brand, entered at 50, advanced to 75 francs per kilo. Packing, etc., included.

Olive Crop in California.

California's olive crop this year, it is estimated by the California Olive Producers' Association, will produce 1,125,000 gallons pickled olives and 1,000,000 gallons of oil, a record output.

FOREIGN CORRESPONDENCE AND MARKET REPORT

AFRICA.

REUNION: Reports from Reunion indicate that the shipments of geranium oil during the first six months of this year totalled about 24,000 Kg. The outlook for the crop now being distilled makes it improbable that 1912's record of 43,000 Kg. will be equalled. Prices are firm.

BELGIUM.

GHENT EXHIBITION.—French Perfumery exhibits are less numerous and more scattered than on previous occasions, but are attractively arranged, a brisk retail business being catered for. One exhibit is quite different from the others, inasmuch as it consists of specimens of the raw materials from which perfumes are prepared. In the center is a stuffed civet cat, with several of the goats' horns in which the civet is exported from Abyssinia. A piece of the precious ambergris is also shown with castoreum, ylang-ylang flowers, rose essence, vetiver roots, citronella grass, cympogon grass, rosewood and liquid gum styrax. This stand is marked *hors concours*.

BULGARIA.

OTTO OF ROSE.—The rose harvest which recently ended, lasted twenty-two days, nearly a week longer than last year's harvest. The rosebuds were rather limited, but the propitious weather since May 14 improved the crop so much that instead of being the smallest on record, as was expected, it is more than the average, and 20 per cent. larger than the 1912 crop. The total yield is about 150,000 ounces, as against 125,000 for last year. The percentage yield from the flowers is more than last year and the quality of the otto is richer. The whole crop of rose flowers amounted to about 27,000,000 pounds, and the average yield of otto was 1 ounce from 180 pounds of flowers, as against 1 ounce from 225 pounds last year. The price of flowers was 25 per cent. dearer than last year's price, being as high as 7 cents a pound, but since the yield of otto was larger this factor is eliminated, and the price of the otto is hardly likely to advance. On the other hand, if any demand appears there is little likelihood of prices receding from their present values. There is very little stock of last year's otto left, except some adulterated goods, so that the new crop otto will have to be delivered against new contracts, if pure otto of rose is required.

CHINA.

SOAPS AND OILS.—Consul General George E. Anderson, at Hong Kong, reports that in 1912 the imports of soaps, cheap toilet articles, and similar novelties were slightly larger than usual. In Hong Kong the large Chinese department stores are introducing such goods to the Chinese much more rapidly and effectively than any other agency. Exports to United States in 1912 included: Aniseed oil, $92,138; cassia oil, $76,682; peanut oil, $248,479.

DOMINICAN REPUBLIC.

PERFUMERY AND SOAPS.—Consul C. M. Hathaway, Jr., at Puerto Plata, reports that the trade of his district in 1912 included imports of perfumery valued at $13,593, of which the United States contributed $1,447. This is a field which American perfumers might cultivate. In soaps the imports were $29,185, of which $28,369 was sent from the United States.

FRANCE.

GRASSE.—Mme. Augustine Marie Martel, wife of Mr. Pierre Martel, of Lautier Fils, Grasse, France, died on Friday, July 18.

ITALY.

OLIVE OIL FRAUDS.—Consul Frank Deedmeyer, at Leghorn, says: "In years past large quantities of olive oil have been shipped from Lucca under the name of 'Lucca Olive Oil' and from other points in Tuscany as 'Tuscan Olive Oil,' which were not pressed from olives grown in the Lucca district or in Tuscany. They were inferior oils shipped into Tuscany from other sections of Italy and from foreign countries and then reshipped to the United States and to other markets as Lucca or Tuscan oils under various designations, such as 'Extra No. 1 Lucca Oil,' 'Finest Lucca Oil,' 'Cream Lucca Oil,' 'The Best Tuscan Oil,' or under other descriptive terms indicating local, Tuscan origin and the very highest qualities. There had been established near Leghorn bonded warehouses in which the cheap foreign olive oils were stored, whence they were reshipped as Tuscan or as Lucca oils.

"Steps have now been taken to put a stop to these dishonest and fraudulent practices, which imposed often on the importer in the United States and always on the ultimate consumer, as the containers in which such shipments were put up had printed on the labels affixed thereto the above false designation. It is believed that these fraudulent shipments have been practically suppressed. One after another of the bonded warehouses referred to have been closed, and the last shut its doors in the spring of 1913."

Exports of olive oil from the Leghorn district to the United States in 1912 amounted to $2,566,818, an increase of $752,000.

PARAGUAY.

PERFUMES AND TOILET ARTICLES.—Perfumes and toilet articles are sold by nearly all classes of mercantile establishments, being imported from the United States and Europe.

SOUTH AFRICA.

PERFUMERY AND SOAPS.—Consul E. A. Wakefield, at Port Elizabeth, gives the following statistics of imports from all foreign countries received in his district: Perfumery, 1912, $131,640, an increase of $18,372 over the previous year; soap, 1912, $113,672, a decrease of $61,118.

Consul N. B. Stewart, at Durban, supplies these import statitstics for that district: Perfumery, 1912, $147,499, a gain of $4,258; soaps, 1912, $223,275, a decline of $171,549.

TRIPOLI.

TOILET SUPPLIES.—Nearly all of the barbers in Tripoli are Italians and the shops compare favorably with those of Italian cities of the same size. The best shop probably does not net the owner more than $2.50 a day, to which may be added about $1 a day in profits from the sale of soaps, perfumes, combs, brushes, razors, etc. Most of the supplies come from Italy, but American razor strops, German razors, and French perfumes are noticed. These articles are obtained chiefly through agents in the principal Italian cities.

TURKEY.

OILS AND SOAPS.—Consul General G. Bie Ravndal, at Constantinople, reports that European Turkey now is less than the size of Connecticut. He furnishes some statistics of trade. Perfumery imports of all sorts, in 1910-11, amounted to $294,084, a decrease of $54,590; soap oils, 1910-11, $494,248, a decline of $8,399. Exports to the United States in 1912: Otto of roses, $19,791, a decrease of $16,993; olive oil, $115,858, a gain of $45,517; soaps, $16,848, a decrease of $4,098.

PRICES IN THE NEW YORK MARKET

(It should be borne in mind by purchasers that the market quotations in this journal are quantity prices. For small orders the prices will be slightly higher.)

Almond, Bitter.....per lb.	$3.50
" F. F. P. A.....	4.50
" Artificial	.55
" Sweet True	.65
" Peach-Kernel	.25-.30
Amber, Crude	.15
" Rectified	.30
Anise	1.70
" Lead free	1.90
Bay, Porto Rico.....	2.90
Bay	2.75
Bergamot, 35%-36%	6.00
Birch (Sweet)	1.75
Bois de Rose, Femelle.....	4.50
Cade	.20
Cajeput	.60
Camphor	.12
Caraway Seed	1.00
Cardamom	28.00
Carvol	2.00
Cassia, 75-80%, Technical...	.90
" Lead free	1.00
" Redistilled	1.40
Cedar, Leaf	.50
" Wood	.16
Cinnamon, Ceylon.....6.50-14.00	
Citronella, Ceylon	.43
Citronella, Java	1.00
Cloves	1.20
Copaiba	1.05
Coriander	6.00-9.00
Croton	1.10
Cubebs	3.30
Erigeron	2.00
Eucalyptus, Australian, 70%.	.50
Fennel, Sweet	1.50-1.60
" Bitter	.75
Geranium, African	9.00
" Bourbon	8.00
" Turkish	3.25
Ginger	6.50
Gingergrass	1.75-2.00
Hemlock	.55
Juniper Berries, twice rect...	1.00
Kananga, Java	3.75
Lavender, English	12.00
" Cultivated	6.00
" Fleurs	3.25-3.75
" U. S. P.....	3.00
" (Spike)	1.10-1.25
Lemon	4.75
Lemongrass	1.40
Limes, expressed	4.50
" distilled	1.00
Linaloe	3.30
Mace, distilled	.75
Mustard Seed, gen.....	8.50
" artificial	1.50
Mirbane, rect.....	.12
Neroli, petale 30.00-40.00	
" artificial 12.00-17.00	
Nutmeg	.80
Opoponax	7.00
Orange, bitter	3.25
" sweet	3.90
Origanum	.40-.60
Orris Root, concrete...(oz.)	3.50-5.00
" " absolute...(oz.)	28.50-32.00
Patchouly	3.00-3.60
Pennyroyal	1.10
Peppermint	3.30-3.65
Petit Grain, South American	3.75
" " French	8.00
Pimento	1.75
Rose .....(oz.)	12.00-16.00
Rosemary, French	.80
" Spanish	.50
Rue	3.00
Safrol	.40
Sandalwood, East India.....	5.25-5.50
" West India.....	1.60
Sassafras, artificial.....	.30
" natural	.65
Savin	1.40
Spearmint	4.80
Spruce	.50
Tansy	4.25
Thyme, red	1.10
" white	1.30
Vetivert, Bourbon	8.00
" Indian 30.00-40.00	
Wintergreen, artificial	.32-.34
" genuine	4.25-4.50
Wormwood	5.75
Ylang-Ylang 30.00-40.00	

BEANS.

Tonka Beans, Angostura....	2.50
" " Para	
Vanilla Beans, Mexican.....	4.50-5.00
" " " Cut..	3.25-3.50
" " Bourbon	3.40-4.25
" " Tahiti	2.50

SUNDRIES.

Ambergris, black .....(oz.)	15.00-20.00
" gray ..... "	25.00-27.50
Civet, horns ..... "	1.75-2.00
Chalk, precipitated.....	.04½-.06
Cologne Spirit .....(gal.)	2.65-3.10
Cumarin	3.25
Heliotropine	1.60
Menthol	6.60
Musk, Cab., pods.....(oz.)	10.00
" " grain ..... "	15.00
" Tonquin, pods... "	13.75-15.00
" " grains.. "	21.00-24.00
" Artificial, per lb.....	1.50-3.00
Orris Root, Florentine, whole	.14
Orris Root, powdered and granulated	.18
Talc, Italian .....(ton)	32.00-35.00
" French ..... "	25.00-30.00
" Domestic ..... "	15.00-25.00
Terpineol	.35-.45
Thymol	1.80
Vanillin .....(oz.)	.33-.36

SOAP MATERIALS.

Cocoanut oil, Cochin, 14c.; Ceylon, 11¼c.

Cottonseed oil, crude, tanks; refined, 9¼c.@10c.

Grease, brown, 4½@4¾c.; yellow, 5½c.; white, 6¾@7c.

Olive oil, denatured, 85c.

" " foots, prime, 7½c.

Palm oil, Lagos, 7¾c.; red, prime, 7¼@7⅜c.

Peanut, 6½@7½c.

Rosin, water white, $7.10.

Soya Bean oil, 6½c.

Tallow, city, 6c. (hhd.).

Chemicals, borax, 3½@4c.; caustic soda, 80 p. c. basis of 60 p. c., $1.50.

DOMESTIC MARKET.

There have been several changes since our last report, especially in lemon and orange oil, bois de rose, linaloe, lime, etc.

In the case of lemon several of the holders in Messina began to feel the carrying strain, and the market sagged slightly. This has had the effect of stopping most of the buying on this side of the water; but consumers must soon show their heads again, for stocks are low.

Reports from Bulgaria indicate that the crop has been a little better than during the last few years, and shipping has commenced, due to the restoration of peace. Prices have eased off slightly, and there is a possibility that Otto of Rose may sell at lower prices next fall, although the drop, if it comes, will be largely offset by the tariff.

The lavender crop, according to reliable reports, is very poor, and this, together with the fact that comparatively little oil was left over from last year, is responsible for an increase in quotations.

BEANS.

The annual jockeying for position on the part of French buyers and importers in this country has begun, those who are looking ahead to stock up are likely to employ mild bear tactics; but consumers should remember that contracts are taken now. Moderate prices for future delivery are not likely to be wonderful bargains.

In some cases buyers have found that beans were inferior stock recured, but they have no recourse because advance payment had been made. Reliable indications point to a shortage of at least 20 per cent. in the next crop, and the present stocks are low.

The new crop of Mexican beans probably will be of about the same size as the last crop. There has been good weather, and the beans should be of good quality. There is a fear in some quarters that political disturbances may become acute with a consequent disturbance in the label market, but this is a rather remote contingency. On the whole the market is firm, and we look for no price recessions in the case of prime goods.

WASHING COMPOSITIONS OR DETERGENTS.

In the complete specification of the British Patent No. 26,958, W. P. Thompson, of 6, Lord-st., Liverpool, on behalf of A. Groeben, of 124, rue Van Artevelde, Brussels, declares this invention to be described in the following statement:—The principal patent Application 4,111 of 1911 is for the manufacture of certain hydrates of carbonate of soda with the addition of silicate of soda and/ or other detergents. Now the present application is for a patent of addition embracing two provisional specifications, namely, Nos. 26,958 of 1911, and 8,751 of 1912, and is for an improvement in or modification of the invention covered by the principal Patent 4,111 of 1911.

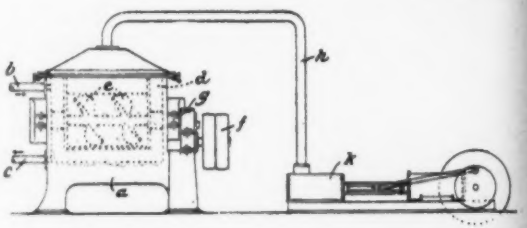
Now I have discovered after a long series of experiments that bodies having the composition of $Na_2CO_3 5H_2O$ and $Na_2CO_3 7H_2O$ behave like definite compounds crystalizing in rhombohedral crystals very similar to each other, but their difference can be detected under the microscope and by physical tests, and the present invention is to claim the manufacture of these definite compounds which have been industrially isolated as far as we are aware for the time first by us, and have hitherto been unknown in industry. I have found that they and the mixture of them, and especially the body having the composition of a pentahydrate have hardly any tendency to cake, and the pentahydrate is especially valuable as containing less water and being more stable even than the heptahydrate, and therefore is a very valuable salt for commercial purposes.

Below the temperature of 30 deg. C. the carbonate which crystallizes out from a solution of mixture of soda ash with water, is the decahydrated carbonate $Na_2CO_3 10H_2O$. The critical temperature below which the decahydrated carbonate forms is lower than 30 deg. when other substances such as silicate of soda are present in the mixture, and, for instance, if silicate of soda solution of 1.2 specific gravity be mixed with an equal amount by weight of anhydrous carbonate of soda (so that the mixture contains about 19 parts by weight of silicate of soda to 100 parts of carbonate and 100 parts of water), the critical temperature below which the decahydrated carbonate begins to form is about 28 deg. C., instead of 30 deg. as stated above for the carbonate mixed with water alone. It may be even lower than when a larger proportion of silicate is present.

In Patent No. 4,111 of 1911 it has been shown how, by cooling admixtures of ash and water with detergents between about 30 deg. and 34 deg. C. a non-caking body results. Now I find that by heating heterogeneous mixtures of the various hydrates from deca- to monohydrate up to a temperature as near the critical temperature of $Na_2CO_3 10H_2O$ as possible, say, 30 deg. C., without melting the mass, it tends to become homogeneous and loses its caking properties when the total water present bears to the anhydrous soda carbonate the ratio of about 106 ash to 90 water parts by weight. If the mixture be heated until it just begins to soften, a little below the critical temperature for the formation of the decahydrated carbonate above referred to, the whole of the highly hydrated carbonate is brought into a condition in which it is very ready to give up some of its water, that is to say, its vapor tension is very high. The vapor tension of the monohydrated carbonate present is still very low. Consequently the water from the decahydrated carbonate is readily transferred to the monohydrated carbonate present, while the whole mixture is kept well stirred or agitated at the desired temperature.

There is no necessity to determine accurately in advance the critical temperature for the formation of the decahydrated carbonate, but the mixture of materials can be heated as before mentioned until the crystals begin to soften, and this determines the temperature which must not be exceeded if the desired action is to take place. The operation is preferably carried out in a closed vessel so that the water vapor will not escape, and the vessel must be fitted with a stirring apparatus to keep the mixture well agitated and to prevent new crystals from growing so as to bind the particles together.

The resulting product will generally contain the whole of the carbonate in the condition of penta- or heptahydrated carbonate or a mixture of these, according to the amount of water originally present in the mixture. If there is insufficient water present some may be added, preferably in the form of more decahydrated carbonate, and if too much water is present some may be removed by carrying out the operation, for instance, in an apparatus connected to a suction plant as described hereinafter, so as to exaporate some of the water. The resulting carbonates with the amounts of water of crystallization above mentioned do not tend to give up or absorb water to any appreciable extent, and the resulting mixture therefore has practically no tendency to cake or solidify. The operation above referred to may be conveniently carried into effect in a mixing apparatus of the type shown in the drawing.



In this apparatus *a* represents the frame, *b* is a water inlet and *c* a water outlet communicating with a water jacket *d*, in order to keep the substances inside the apparatus at any desired temperature. The mixing blades *e* indicated in dotted lines are on a shaft or shafts driven from a pulley *f* through gearing *g*. A pipe *h* leading from the top of the apparatus may communicate with a vacuum pump *k* which may be used to draw off some of the water vapor from the mixture as stated if rather too much water is present in the mixture. Of course, any other convenient form of mixing apparatus could be used for the purpose, and the apparatus illustrated is intended to serve as an example only.

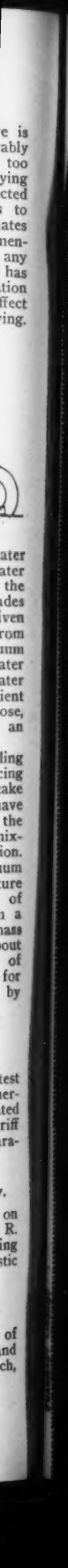
It will be clearly understood that the process according to the present invention is applicable for use in producing finely divided washing sodas which will not tend to cake from washing sodas already produced, but which have become caked, or are in a condition to become caked, the caked masses being broken up if required before the mixture is subjected to the process according to this invention. The type of stirring apparatus described with vacuum attachment can also be used to carry out the admixture of soda ash and water with or without additions of detergents such as silicate of soda by starting from a high temperature, say, 50 deg. C., and allowing the mass to crystallize between the critical temperature of about 34 deg. and 30 deg. C. as described in Patent 4,111 of 1911. In this case the vacuum can be used as a means for removing heat during the early part of the reaction by causing evaporation of some of the water.

Soya Bean Oil Protest Overruled.

General Appraiser McClelland has overruled a protest of S. L. Jones & Co., San Francisco, and holds that merchandise described as soya-bean oil which had been treated and manganese added, assessed under paragraph 3, tariff act of 1909, was not entitled to free entry under paragraphs 639 or 559.

Drawback on Toilet Preparations and Perfumery.

Treasury Decision 33,626 announces a drawback on toilet preparations and perfumes granted to the J. R. Watkins Medical Co., Winona, Minn., the same applying to certain goods manufactured with the use of domestic tax-paid alcohol.

"Bur Oil," New Russian Discovery.

Anon. *Farben-Ztg.*, 17, 2334.—Expressed from seed of common bur (no constituents given); used in varnish and soap manufacture. Discovery is not new (cf. Lewkowitsch, *Oils, Fats and Waxes*, 2, 79).